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BOOK II

THE COOKING SCHOOL

Consolidated Library of Modern Cooking and Household Recipes

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of the National Cook Book

AND

A LIST OF CONTRIBUTORS WHICH INCLUDES MANY OF THE FAMOUS CHEFS AND COOKING EXPERTS OF THE UNITED STATES

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LESSON I

FOOD

Of all the subjects capable of tempting the pen of the scholar, the professional man, and even the amateur, none has been more prolific or more exploited than that of food; and the number of works which treat of it, either in its entirety or along the lines of the different sciences which spring from it, are innumerable.

Some have discussed it from the economic, the philosophical, and the social point of view. Others have followed the more direct line of cooking and have made it the subject of wise scientific essays; while another class have sung and glorified the pleasures of the palate. Whatever may be the intrinsic merit of these works, they all point to the perfection of the art of good living, which plays an important part in the march of human progress and of civilization.

There can never be too many of such works, so varied are the kinds: and the more new ones produced, the greater will be the emulation, the more will a knowledge of the true scientific principles of food and feeding be disseminated,

and the more quickly and thoroughly will be popularized the correct methods and practices in the art of preparing and supplying food.

The question of the proper nourishment of the body is wisely regarded as of the highest importance, since it alone, with rest of the wearied body, assures the suppleness of muscle, the vigor of the system, and the power of the mind. But in order to properly realize the complex problem of food, it is highly necessary to know the good and bad qualities of food stuffs; to be able to select and to treat them according to the laws of hygiene and the rites of proper cooking; to know the proper value and the use of accessories and sauces, without which one can never attain to the niceties of seasoning and taste.

To one who realizes the importance of proper preparation, and of sure guidance in these matters, there has always been the uncertainty of knowing where to find the precise, certain teachings; the processes sanctioned by the practices which, in association with scientific contributions, enable one to adjust the question of food to tastes, ages, disposition, occupations, and climate.

The object of this work is to present, as far as possible, the sum of our knowledge of the art of maintaining good health by proper nourish-

ment. An effort is made to present all that is worth knowing upon the subject by contributions from the pens of the highest medical authorities, famous chemical analysts, eminently successful housekeepers, and most excellent cooks.

It aims to be a sure guide and a reliable counsellor to the whole household economy, whether pretentious or simple. The facilities of an elaborate establishment, faultlessly equipped, are not of course to be compared to those of a remotely situated farmer's cottage; but the same knowledge, the same care ought to direct the preparation of the meals of those who inhabit the one or the other. The more a kitchen is ordered by hygienic laws, the more it rests upon demonstrated facts, the more it bases its formulas upon the gifts of professional students; the more will the art of cooking tend to become an exact science; and the hazard and chance of a well-cooked, nourishing meal be eliminated. The rapid advance of the applied sciences, and more especially that of chemistry, make it compulsory upon the one who holds the key of the health and welfare of the family to summon to her aid all of the forces for the satisfactory solution of the difficult problems relating to the wholesomeness of food.

It is especially true that the person to whom

is entrusted the choice and selection of foods should not act blindly or unintelligently in the matter. It is extremely important that such should know the nutritive value and digestibility of the diet of each individual, and what constitutes the proper ration of each, not in quantity, but in quality and kind.

As meats play such an important part in the household economy, they are made the subject of careful study.

Poultry and game are not less minutely studied: all of the preliminary processes are faithfully described by a demonstration of methods of dressing, carving, etc.

FOOD AND ITS VALUE

A good table, in the hygienic sense of the word, is the principal element of good health. It is, therefore, necessary to understand clearly what hygiene teaches us is a good table. Science is everywhere making rapid strides. In industry, commerce, and everywhere, the habits of chance, and of haphazard, are giving way, little by little, to scientific methods. The time has come when we are able to take advantage of the exact knowledge of foods and their values which science has placed at our disposal. It is doubtless difficult in practice, except perhaps in large and fully equipped

kitchens, to conform exactly to the scientific rules; but one is able to draw from them sufficient direction to enable one to proceed upon right lines and according to right principles in this most important of all matters.

The human body has been long ago likened to a lamp or a fire, which burns its food as a stove consumes the fuel with which it is supplied. It is a frequent poetic figure to speak of the "spark of life," or of the life which flickers, goes out, or kindles as a flame. And science will bear out this poetic metaphor, if one does not take it literally nor push the figure too far. Lavoisier, the eminent French chemist of the eighteenth century, proved conclusively that we are very like a lamp which consumes itself or as a fire that burns. The digestion supplies the necessary combustible material, and the breathing with the lungs is at once the draught which supplies the air to the burning fire and the chimney which carries off the gaseous products.

The heat furnished by this combustion of our food is that which keeps our bodies at the proper temperature. It has further been said that our bodies are not only fire which produces heat, but are at the same time machines capable of doing work,—that they are steam-engines in which the combustible materials supply by their destruction both heat and work.

This is true with one exception: In a steam-engine that which burns and is destroyed is the fuel. The machine itself is made up of pieces of metal, the wear and tear of which are insignificant and almost of no account. But in the human body not only is the food consumed, but all the pieces of the body; the tissues, bones, and all its parts are used up and destroyed. It must, therefore, be plain that our food performs the double part of supplying the fuel for the human engine, and of continuously repairing its parts. Let us now consider the materials which are capable of performing this double duty in the economy of man.

SIMPLE AND COMPOUND FOODS

The materials with which man repairs the losses which he continually sustains are derived by him from the tissues of plants and animals. Plants furnish either grains, such as the grains of cereals which give us meal and bread; or the leguminous grains, as peas, beans, etc.; with roots and tubers, as carrots, turnips, and potatoes; with leaves, as lettuce, spinach, cabbage, cauliflower, etc.; or with fruits, as apples, pears, oranges, cherries, peaches, apricots, etc. From animals we derive three classes of products; the flesh, or meat with its accompanying fats; milk and its products, cheese and butter; and eggs

All of these foods are known as compound foods, because they are infinitely complex in their nature and chemical composition. Chemistry has determined beyond doubt that there are four types of simple foods derived from this complex mass of compound animal and vegetable foods:

1. The albumens.
2. The fats.
3. The starches and sugars.
4. The mineral matter, or salts.

Milk, the ideal food for the young, embodies in itself these four types of simple foods. And it is from an examination of it that we can best come to an understanding of these types. If we allow the milk to stand for a time in a suitable vessel, we will see the cream rise little by little to the top and form a yellowish layer or covering. This cream, when skimmed and churned, solidifies into butter, and here we see one of the types of simple foods, viz., fat. The skim milk when treated with rennet and subjected to pressure yields cheese, which is a simple food of the type of albumen. If the liquid which remains be slowly evaporated over the fire, we will procure yellowish crystals of sugar of milk, a type of the starches and sugars. Lastly, if the liquid be completely evaporated there will remain some solid matter much re-

sembling the common salt of the household. This is an example of the fourth type; the mineral matter or salt from the milk.

Chemical analysis of all of the elementary foods has shown that under the infinite variety of outward aspects which they present, whether meat, eggs, vegetables, or fruits, there are always present one or more of the four varieties of simple foods, and these determine the character of the food.

To estimate the value of an article of diet is to know what it contains in the way of albumens, fats, starches or sugars, and mineral matter. Practically these four types represent all that is necessary to supply the wants of the human body. The fundamental problem of supplying proper food consists in combining these types in suitable quantities, and under the most favorable forms to satisfy the needs of each individual. It is to be remembered that though these simple types of food are present, yet they are in very variable proportions. Therefore, in order to properly apportion a daily ration exactly suited to the needs of each person, it is necessary to combine the several compound foods, such as milk, bread, meat, vegetables, grains, and fruits, in such a way that the individual will obtain from them the albumen, fats, sugars and starches, and salts which

are needed for the thorough nourishment of the body.

A thorough and intelligent knowledge of this important subject necessitates the consideration of

1. The simple foods.
2. The compound foods.
3. The manner in which it is necessary to combine these in order to make a diet; then to select the proper quantities of each, so as to form a ration for each person.
4. The manner of dividing that ration into the several meals.

THE SIMPLE FOODS

The simple foods, which constitute the truly nourishing portion of what we eat, present themselves to us in a very great variety of external forms. One finds difficulty to appreciate, for instance, that the flesh of meat and the white of an egg are composed of exactly the same substance, viz., albumen. But whoever wishes to consider food in its true light as an article of nourishment must learn to ignore the external appearance of the several articles and to regard them as so much of this or that simple food.

Albumen.—The type of this class of food is the white of an egg, which the Latins called

albumen, and which is a solution of almost pure albumen in water. All of the animal and vegetable tissues contain some albumen in varying degrees; so it is found in all the compound foods. Meat is composed almost entirely of albumen of several sorts, combined one with the other. The albumen of milk has already been referred to as casein or cheese. Bread contains, in addition to a certain quantity of starchy food, an albuminous substance known as gluten, which predominates in the "gluten bread," or the whole-wheat bread so beneficial to diabetics. All of the vegetables and fruits contain also more or less albumen. Even the grass of the field upon which the cows feed contains the albumen which is an indispensable article of food for all living beings.

All of the albuminous forms, whether the white of an egg or the semi-solid mass as found in meat, possess the quality of being coagulated by heat. By coagulation is meant the act of changing into a hard and elastic mass. This change occurs when a raw egg is changed into a hard-boiled egg, or when a piece of raw beef is changed into boiled or cooked beef by the action of heat.

Fats.—This class of foods is probably the most commonly known of the four types of simple foods. The major part of the fats

which we eat are not disguised and hidden in the compound foods. They are added to the ration of food voluntarily. There are hardly any species of meats which are not accompanied by sufficient fat for their proper preparation as food. The majority of other foods, and especially the vegetables, require the addition of artificial fats, such as butter and lard, among the animal fats, and of olive oil, etc., from the vegetable kingdom.

Starches and Sugars.—Relatively very large quantities of these are eaten by us every day, as we shall see further on, whether they are found in the compound foods, or are added by ourselves to our dishes. Starch occurs largely in bread, in the form of flour starch or wheat starch; and in potatoes and other vegetables. These supply naturally the starch elements of our food. Arrowroot, tapioca, and sago are starchy foods extracted from the trunks of trees in tropical countries.

Sugars are furnished naturally by certain substances of vegetable origin, as the fruit-sugars from grapes, apricots, pears, peaches, etc., and as special products such as honey. Sugar is artificially prepared from sugar-cane and from beet-root. The starches and sugars are grouped together because, in the process of digestion, starches are changed into sugar.

This begins in the mouth under the action of the saliva and is completed in the intestines.

Salt and Mineral Matter.—This type of food is best represented by the table salt, the chloride of sodium of the chemist. It is added to our foods both in cooking and at the table. But this is not the only salt which we consume. We daily absorb a number of others which are absolutely necessary to our bodily welfare. These are found in all of the articles of which we partake. They constitute the ashes which remain when articles of animal or of vegetable origin are burned. They include the sulphates, phosphates, and chlorides of potassium, sodium, magnesium, lime, and iron. Salts are a part of our bodily structure, and are necessary to its growth and to the upbuilding of the wearing tissues. Iron is needed to repair and to supply the red corpuscles of the blood. Lime and the phosphates are necessary to the growth of the skeleton. All of the salts which are needed for the growth and repair of the body are contained in the articles of our food, with the single exception of the common salt which we add as a seasoning. There is a peculiar physiological reason for salting our food. It is well known that among the wild animals only the grass-eating or herbivorous animals care for salt. The vegetables contain an abundance

of the salts of potassium, and when they are taken into the system the potassium eliminates the sodium from the body and thus the amount of it is diminished and must be supplied artificially. In flesh-eating animals the supplies of potassium and sodium are more nearly even, and no elimination of the one by the other occurs.

LESSON II

THE COMPOUND FOODS

We have considered the four types of simple foods—albumens, fats, starches and sugars, and mineral matter—separately. We have now to consider them mingled together in varying proportions in the compound foods in which they occur.

FOODS OF ANIMAL ORIGIN

1. The several sorts of butcher's meats.
2. Poultry and game.
3. Fish.
4. Milk, with its products—butter and cheese.
5. Eggs.

Meat.—Meat is made up of the muscles composed of fibres interlaced with one another and running in a direction easily noticeable in the cut of meat. The tendons, or masses of white, elastic fibres, are also to be seen. Each muscle is surrounded by a whitish membrane which completely envelops it and allows free passage of one muscle over another. In the portions of the meat which are less desirable for food

these membranes are thicker, tougher, and more numerous. In the case of domestic animals which have been " stall-fed " or artificially fattened, we find deposits of fat over the body. These are not to be seen in the case of game and of animals that have lived free and unrestrained. To show that this absence of fat is the result of muscular activity, we need only cite the case of the pig, which is noted for its fat, and its indolent life.

The flesh of freshly killed animals is hard and tough and becomes even more so under the action of heat. After twenty-four hours it is found that the muscular rigidity has disappeared. During this time the small quantity of starchy matter which the flesh contains becomes changed into lactic acid, which permeates the meat and sets up a disintegrating action which renders the meat much more tender. A similar artificial action is carried on in the kitchen, when a piece of tough meat is macerated for a time in such an acid as vinegar or wine to make it tender.

The chief constituents of meat are: water, albumen, and fat. There is very little starch or sugar; and the salts do not amount to one part in a hundred. The following table illustrates the quantities contained in 100 ounces of meat.

COMPOSITION OF FRESH MEAT

	Water	Albumen	Fat
Beef, very fat	53	17	29
moderately fat	73	21	5
lean	76	21	2
Veal, fat	72	19	7
lean	78	20	1
Mutton, very fat	53	16	29
moderately fat	76	17	6
Pork, fat	47	14	37
lean	72	20	7

The most abundant element of meat is water. Moderately fat or lean meat is nearly three-quarters water, and one-fifth albumen. The quantity of fat, of course, varies. The three principal foods of animal origin are meat, eggs, and milk. The first two contain only the albumen and fats. Milk alone contains starch or sugar. Thus it can be seen that a diet of meat or eggs will not supply the starch or sugar, and, that to get it, it is necessary to add bread.

With reference to veal, the Germans have a saying: "Kalbfleisch ist Halbfleisch," that veal is only half a meat. This is prompted by the well-known experience that, as an article of food and nourishment, veal is less satisfying and less lasting than are other meats. The place that albumen takes in other meats is taken by a sort of gelatine in veal; and gelatine is far inferior to albumen as an article of nutriment.

DIGESTIBILITY OF MEATS AND OF FATS

There is much error in the popular mind as to what constitutes digestibility of food. In general any food is said to be digestible which, even when eaten in large quantities, does not occasion pain and suffering, or cause a feeling of fulness after eating. A more scientific test is that which tells the length of time that the food remains in the stomach or in the digestive tube; or rather the length of time necessary for the complete digestion of such and such an article in such and such quantities. But the most accurate method of expressing the digestibility of an article of food is to tell in what proportion it is absorbed by the digestive tube.

Every one admits that roast meat is more digestible than raw meat or boiled meat. Poultry or roast veal, the so-called white meats, are said to be very easily digested, and are consequently selected for invalids. These differences are doubtless due to the greater or less delicacy of the muscular fibres which offer a varying resistance to the digestive juices; and also to the quantity and nature of the fat which pertains to each sort of meat.

This last point is very important; we are accustomed to say that the digestion of fat in a healthy person is in general good. But it can

be shown that a ration of a few ounces of fat in 24 hours represents an accomplishment which is hardly performed by those living in northern countries, yet experiment shows that the digestive tube is capable of absorbing considerably larger quantities. Thus in one series of tests it was found that of three ounces of butter, all but six grains were absorbed, but the results with other fats were not so good. Of the fat of mutton, which does not melt at so low a point as does butter, about 10 per cent. did not absorb. But liquid fats, such as olive oil, which are kept as liquids by the heat of the body, were wholly digested.

In general the stomach seems to experience a sort of antipathy to fats, and there is a tendency to arrest digestion by using them. We are all able to tell the effect upon ourselves and upon our digestions by the foods which are very rich in fats, and especially those of fish, which are fatter than others.

It is probable that fat plays a great part in giving to the several kinds of meat their distinctive taste. This is a point to be borne in mind in frying, as the fat used is very likely to impart its flavor to the food which is cooked in it.

THE NUTRITIVE VALUE OF BOUILLON AND OF MEAT EXTRACT

A quantity of bouillon made in the ordinary way, without completely destroying the boiled meat, contains approximately the following matter: Albumen, .3 to .4 per cent. Gelatine, .3 to .6 per cent. Fat, .5 to 1 per cent. Salts (natural and added), 1.3 to 1.5 per cent. Extractive matter, .6 to .7 per cent. Water, 95.5 to 97 per cent.

Much of the albumen of the meat rises to the top as foam and is removed. Only a small quantity of the albumen dissolves in the liquid, on account of the natural acid which is present in the meat.

The gelatine is present in a quantity less than 10 per cent., which proportion causes liquid to congeal on cooling. A bouillon which would so congeal is not at all desirable.

The fat varies according to the nature of the meat used. Very fat bouillon may contain from 3.3 to 4 per cent. of fat, but such quantities are usually repugnant and are not easily borne by persons with weak stomachs.

It is safe to say that the quantities of albumen and fat supplied by a portion of bouillon are about the same as those yielded by two or three spoonfuls of cow's milk.

The nutritive value of bouillon is, therefore, weak, as is also that of meat extracts, which are only bouillon evaporated to dryness, or a semi-solid state, but their agreeable taste and stimulating effect render them useful adjuncts to the art of cooking.

It is a very wrong idea, maintained by many people, and even by many physicians, that meat extracts contain the nourishment and food value of a large quantity of meat; they do nothing of the kind, else albumen, fats, and other food substances would be present in large proportions, and chemical analysis shows this to be far from the truth. Bouillon and solutions of meat extract contain these substances in extremely small quantities, hence the nutritive value of bouillon is very slight, and that of meat extracts, or so-called condensed meat, is often still less.

From what has been said it must not be hastily concluded that bouillon is of no use or value whatever. While a healthy person finds in it only a very small portion of what he needs, to the invalid or convalescent, to whom the smallest quantity of nourishment that can be borne is a blessing, bouillon is one of the most useful forms to supply to a worn-out and impaired system a first food, agreeable, easy to digest, and one which possesses wonderful stimulating properties. This last property

cannot be emphasized too strongly. It explains the marvellous effect produced by a quantity of bouillon taken after a march or prolonged fast. The effect is undoubtedly a nervous one. It is probable that the bouillon produces a beneficent effect upon the stomach itself. Some physiologists claim that bouillon possesses the power of stimulating the secretion of pepsin, the essential agent of digestion. This explains why bouillon has become so generally and so justly appreciated.

LESSON III

MEAT

Meat proper includes the flesh (1) of cattle, which we call *beef,* and of calves, which we call *veal;* (2) of swine, called *pork;* and (3) of sheep and of lambs, called *mutton* and *lamb* respectively.

All of these meats, particularly beef and mutton, are in use at all seasons, though the two last named are in finest condition in the winter, while lamb and veal belong more especially to the spring and early summer months.

We use as *meat* not only the actual muscular flesh, but also the fat, sinews, heart, stomach, and liver, the tongue and brains.

Beef is the most nourishing meat. Next in order comes mutton.

Meat that is dried or smoked is more nutritious than fresh meat, but *corning* draws out the juices.

We have already pointed out that some kinds of meat are much more digestible than others. Pork, on the one hand, being fat, is indigestible, and the same is true of the tough, muscular tis-

sue of such parts of an animal as the kidneys and the heart, while the finer-fibred flesh, such as tender beef or mutton, the breast of chicken and some varieties of game, will always be found more digestible. Naturally, those muscles which are used the most become the hardest, or *toughest*,—but these are also the richest and juiciest as well.

Meat should never be allowed to remain long in the paper in which it is wrapped, nor should it be placed in water, as much of the juice is lost in this way: it is better to wipe it with a clean, damp cloth if one wishes to cleanse it.

It is important to remember in buying that it is not always economy to purchase the cheapest cuts,—one must take into consideration how much of the piece selected is edible meat, and how much bone or fat. The most economy lies in getting the best nourishment, bearing in mind that the less tender parts are the more nutritious. Of course, in order that the meat be wholesome the animal must be healthy,—and if the animal be well nourished, then the meat coming from it will be nutritious.

Tender cuts are best for broiling and roasting. The cheap cuts should be selected for a stew, and should contain some of both fat and bone, for the sake of the better flavor and body that will result. Careful cooking will bring out

some of the nitrogenous elements from the bones, and the rich fat is by no means to be despised.

In winter one appreciates the heat-giving qualities of fat, and it should at no season be thrown away. This is especially true of beef fat. When used in bread or pastry as shortening, or for frying, etc., or even for greasing pans, fat should be clarified. This is the simplest of processes, and consists of merely heating it with water, so that it is not burnt; the greasy odor passing off as the water evaporates; or with thin slices of raw potato, which absorb the organic matter in its passage from the fat.

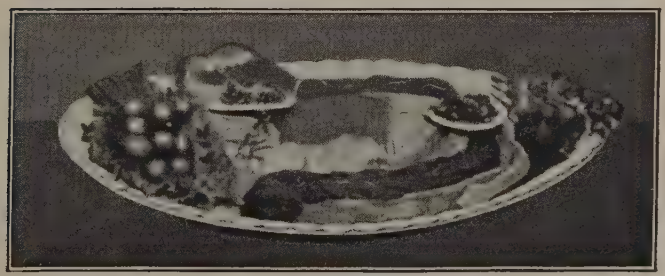
It is of prime importance to know how every variety and every part of meat should be cooked so as to prepare it to the greatest advantage, and so as to retain as much as possible of the juice which is its life.

Dry, intense heat causes the meat fibre to contract and become hardened; whereas a "slow fire" softens it. And while, by being heated, the albumen will only become the harder, we find that it will dissolve in cold water. Consequently, those meats that are of tough fibre should be cooked in water without an extremely hot fire.

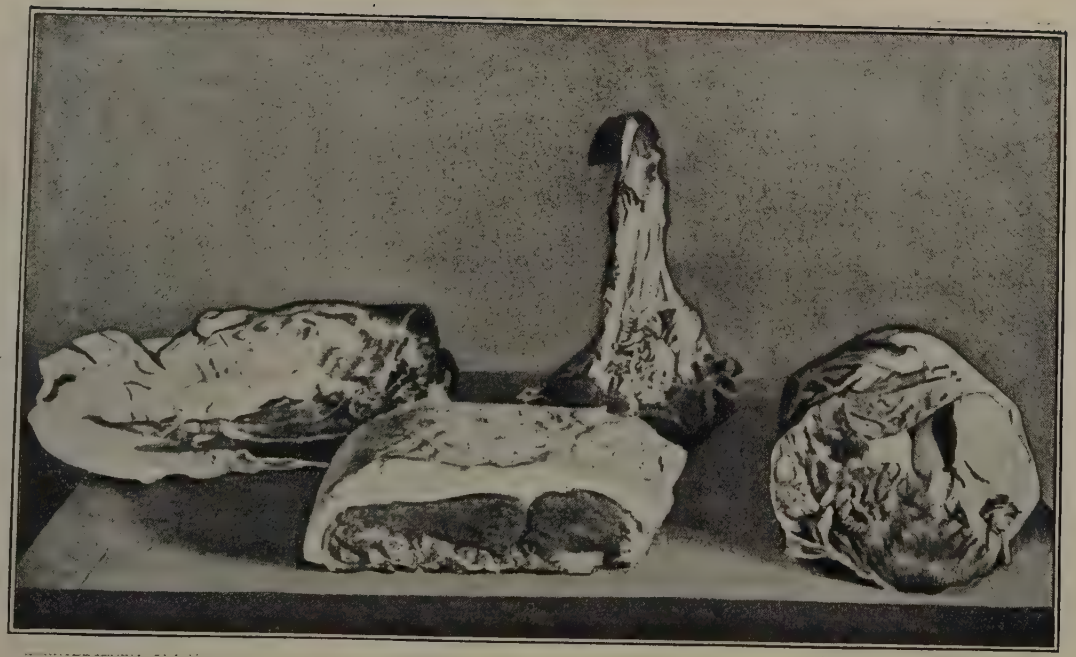
The process of cooking meat in water gives

Porterhouse

Untrimmed Sirloin or Porterhouse



Sirloin Steak



Cuts of Beef

Top Sirloin Centre Bones Fillet

us: (a) the *boiled* meat, which retains all its juices; (b) a *stew,* in which the juices are mingled with the water, so that we eat this *with* the *meat,* or, (3) a soup or broth, in which the juice is all extracted and is used alone.

BOILING

To boil meat, have a kettle large enough to permit the meat to be entirely covered by the water, and let the water come to a boil before the meat is placed in it. Then let it remain for from five to ten minutes, which will be long enough to harden the albumen, as explained above, and prevent the juices from running out. After this, keeping the kettle covered so that the steam cannot carry off the life and flavor of the meat, place it where it will be just below the boiling-point. Skim off the coating of albumen that rises to the surface.

The meat will taste much better, and be all the tenderer, if one takes plenty of time for the boiling, instead of keeping it longer over the hottest fire.

After fifteen or twenty minutes, the actual cooking commences, the heat having by this time gone through and through the meat. Then let it cook, allowing twelve to fifteen minutes for each pound.

It will be found that enough of the juices

always escapes from the meat into the water to make it answer the purpose of gravy.

Sometimes the water containing the meat is placed in the oven instead of over the fire, which adds to its flavor.

Or, flavor may be supplied either by seasoning the water itself, or by adding a stuffing.

There are various ways of *steaming* meat. This may be done over boiling water, placing it, when it has in this way become quite tender, inside the oven, for the sake of the added flavor to be derived in this way.

The familiar "pot roast," or *smothered* meat, is prepared by simply steaming it in its own juices. It is placed in the oven in a tight jar and left until the juice is partially drawn out, after about an hour; then cooked by greater heat, allowing half an hour to each pound of the meat. If the meat is cut into small pieces, the cooking will not require so long a time. The juice can be made into a thick, rich gravy.

BEEF

When good beef is first cut, the lean is firm so that no mark of the finger remains when one presses it; it is of purplish red, changing to bright red, and becoming moist, after being exposed to the air.

There should be plenty of fat; if this is lack-

ing, it is a sign that the meat comes from an old or poorly fed specimen.

When the beef-animal first comes into the hands of the butcher, it is split into halves, or "sides." Each half is then divided into fore-quarter and hind-quarter, the division being made just back of the ribs.

The first six ribs, counting forward from the loin, are called the *prime ribs.* The first steaks cut on the small end of the loin are called *short steaks,* and have not much tenderloin: between these and the point where the hip bone joins the spine, come the *porterhouse* steaks, and between this joint and the thighbone the *sirloin.* This name, "Sir Loin," was given as a title indicative of superiority, in recognition of the tender and juicy nature of the meat that comes from that little-used muscle, or "cushion," found on the loin by the backbone.

The *tenderloin,* another little-used muscle, soft, but without much flavor or juice, is found inside of the loin, under the "short ribs."

The best cuts for broiling are steaks from the loin: short steaks, porterhouse, and sirloin.

MUTTON AND LAMB

A large, heavy animal, two or three years old, makes the finest mutton; the flesh should be bright red, with firm, white fat. Good South-

1. FORE-QUARTER OF BEEF

A, B, C, Back-half. D, E, F, G, H, I, J, Rattle-rand.

A. First five ribs or prime ribs. Five-rib cut. Used for roasts and steaks.

B. Five chuck ribs. Poorer roasts and steaks.

C. Neck, used for beef tea, stews, boiling, etc.

D. Sticking piece, used for corning.

E. Shoulder, used for steaks, corning, etc.

F. Shin, used for soups and soup stock.

G. First strip of rattle-rand, used for corning.

H. Middle strip of rattle-rand, used for corning.

I. Butt end of brisket, used for corning.

J. Navel end of brisket, used for corning.

2. HIND-QUARTER OF BEEF

A, B, C, D, E, F, Round of Beef. G, H, I, Rump. J, K, L, Sirloin. M, N, Flank.

A. Shin. Suitable to be used for soups and stock.

B. Lower or poorer part of the round, used for stews, etc.

C. Upper and best part of the round, used for steak and beef tea.

D. Lower or poorer part of vein, used for stews, chopping, braising.

E. Upper and best part of vein, used for boiling, steak, beef tea, spiced beef, etc.

F. Aitchbone, used for roast, stew, and stock.

G. Face of rump, used for roast or steaks.

H. Middle of rump, used for steak.

I. Back of rump, used for roasts or steaks. These steaks may be cut with the grain, or across the grain of the meat.

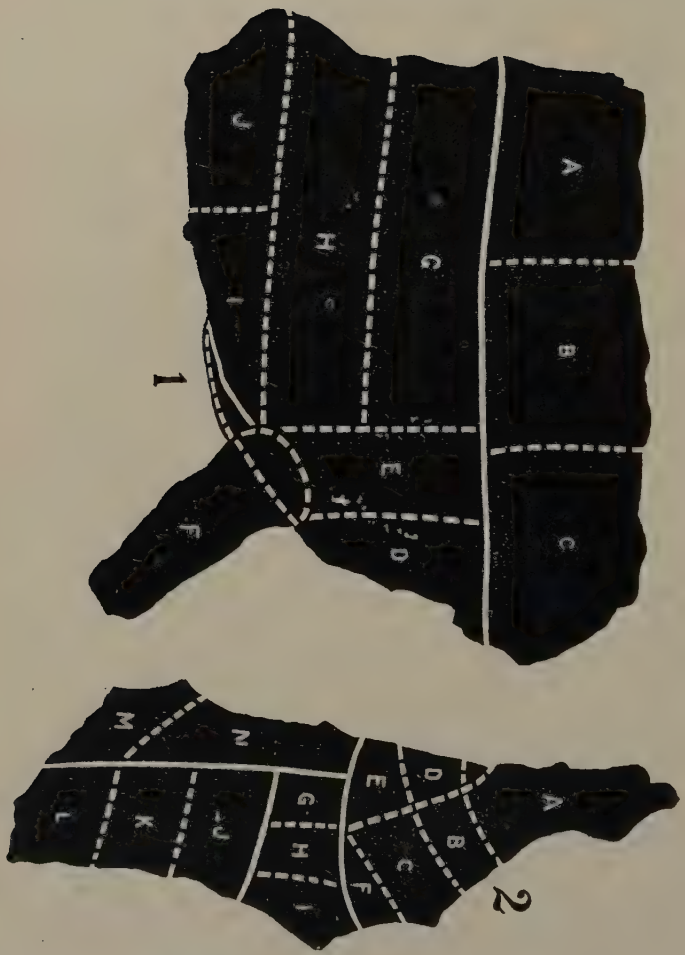
J. First cut of sirloin, used for roast or steaks. It contains tenderloin.

K. Second cut of sirloin, used for roast or steaks; it contains tenderloin.

L. Tip of sirloin, used for roast or short steaks. Contains no tenderloin.

M. Thick end of flank. Used for corning, rolling, boiling.

N. Thin end of flank. Used for corning, rolling, boiling.



1—Fore-Quarter of Beef
2—Hind-Quarter of Beef

down mutton has always been considered the best.

Mutton and lamb are generally quartered, as is done with beef. The fore-quarter is divided into head, neck, shoulder, breast, and rack; the hind-quarter into leg and loin. The loin is divided into *chops*. The hind-leg and the flesh back of the hip-bone, together, are called *leg of mutton*. The *shoulder*, which is not expensive, has the fore-leg and sometimes two or more of the ribs left on for *roasting*. The finest of *roasts*, consisting of the whole upper back part of the sheep, is called *saddle of mutton*.

The best cuts for broiling are the rib or loin chops.

Spring lamb is so much smaller than mutton that it is sold and cooked only in halves and quarters; the " fore-quarter " being considered the more choice.

Our *lamb chops* do not come from spring lamb, but from small, thin mutton, or young sheep.

Chops are of several varieties. The South-down chops are fully two inches in thickness, while the usual American chop is not more than half an inch thick. Loin and rack chops are prepared exactly as a broiled steak. When the loin chops are trimmed we call them *French chops*. The daintiest way of serving these

French chops is in the form in which they are called *masked chops.* When the chops have been quickly broiled for five minutes, and while they are still warm, place on one side of each chop a little mound of nicely seasoned, boiled mashed potatoes, beaten until very light. Then dip the chop, with this addition, into beaten egg, cover it with bread crumbs, and dip for a couple of minutes into hot fat. A paper "holder" is put over the end of each chop bone, and the chops are laid on a platter with a mound of peas beneath; the dish includes really two vegetables, delicately served, besides the chops.

Sheep's heads are prepared and served, two at a time, just in the manner of the single calf's head.

The *kidneys, liver,* and *heart,* which are delicious, and far less expensive, are also served as are those of the calf.

VEAL

The best *veal* comes from a two-months-old calf. The meat is flesh-colored, and firm, with clear, white fat. One should never buy veal that is white and lean; it is not safe to eat young veal.

It is divided almost as mutton is. The hind-quarter cuts are the finest. Chops and steak,

or pieces for roasts, come from the loin and the leg. *Veal cutlets* are slices cut from the leg, containing a round section of the leg-bone.

The *sweetbreads,* sold in pairs, are a part of the digestive viscera, which accounts for their being so digestible. A pair is composed of a "heart" and a "throat" sweetbread. The former is the short, firm one, preferable when to be served whole. The other is long, and full of membrane, but just as desirable if it be served creamed, or picked small.

However prepared, it is necessary to wash and parboil, or boil, sweetbreads when they first come from the market, as they are in danger of "spoiling" quickly. It is then possible to keep them for a day or two in a cold spot.

PORK

Fresh pork is firm, and of a pale red color; the fat is white. Good, fat salt pork is white, or slightly pinkish. One is obliged to be very careful in selecting pork, as the speckled meat is often diseased. At best, pork is very difficult to digest; even in the use of breakfast bacon care should be exercised.

Pork for *chops,* or roasting, comes from the ribs and the loin.

When salted and smoked, the hind-legs are called *ham;* the flank *bacon.*

Sausages are made of chopped trimmings, fat and lean, packed in cleaned intestines.

POULTRY AND GAME

The domestic fowls which we designate as *poultry* include chickens and tame turkeys, ducks, geese, and pigeons. *Wild* turkeys, ducks, and geese, quail, partridges, and grouse, together with venison and other *wild* flesh, we call *game.*

Chicken is always in season. *Spring chickens* used to come only after the first of May, but can now be had earlier,—thanks to the modern incubator.

Capons are seasonable through the winter and early spring.

Turkeys through the autumn and early spring.

Ducks and *geese* from the first of December to the first of April. *Green geese* and *ducklings* from the first of June until September.

Game is in season during the autumn and winter months, from about the first day of November (the exact date being regulated to some extent by the local game laws) until February. Cold storage game is, of course, obtainable at other times of the year.

Venison is best from September first to Jan-

uary; wild duck, geese, and partridges, from the same date until April.

The most delicate meat of poultry comes from chickens, pigeons, and the guinea-fowl.

The guinea-fowl may be bought at all seasons, but is best from the first of June to October. Owing to the short muscle-fibres the breast-meat of poultry is more tender, though less highly flavored, than the dark meat of the leg.

Chicken of five months or less is called *spring chicken.* When over a year old it is called *fowl;* naturally the flavor of the full-grown chicken is finer than that of the very young. For roasting, a young cock is considered the best.

Of turkey, the hen is preferred, though frequently quite young gobblers are roasted.

Ducks and geese should not be over a year old.

The proper course with barnyard fowls is to keep them, for six days at least before they are killed, in a spacious, clean coop, feeding them corn for at least five days, and then soft-boiled rice or skimmed milk for the last day. For the last night they should have no food, but plenty of water. The result will be light, delicately flavored flesh, clean intestines, and an empty "crop."

KILLING A FOWL

Open the mouth of the fowl and cut it on the inside of the neck, severing the jugular vein with a sharp knife.

It is important to hang up poultry at once by the feet so that the blood runs out freely, making the meat whiter and more wholesome. Before it becomes cold, poultry should be carefully picked, without breaking the skin anywhere.

Scalding chickens is a lazy way of getting rid of the feathers, is a very bad practice, and renders the meat more likely to "spoil."

Poultry should not be eaten until at least six or eight hours after killing, but should be picked and drawn promptly.

SELECTING A FOWL

Poultry should be full-grown, but not old. A chicken should be plump, but not so fat as to be heavy. The flesh ought to be firm, the end of the breastbone and the wing limber.

The *capon*—"spayed" hen or castrated cock—combines the flavor of full-grown fowl with the delicacy and tenderness of a young "broiler." The meat is expensive and most delicious.

DRAWING

The chicken or turkey, being already picked, is held over a little flame, taking care not to let the soot collect on its skin. Turn it, unfold its wings, etc., until the long, hairy feathers are thoroughly singed off. Then put it at once into a pan of cold water, wash, rinse, and wipe it. Now chop off the head, leaving as much as possible of the neck. Next, run your knife along the side of the legs, cutting the skin; bend the legs so as to expose the sinews on top, holding the upper part of the leg; loosen the ligaments, and pull them out with a strong fork or skewer. This is the process of removing the feet. Then the joint muscle should be cut so as to expose the under ligaments, which are next drawn out. Finally, cut the muscle at the back. There are seven sinews in all to be drawn out.

Turn the fowl over so as to be able to cut to the bone along the back of its neck. Pulling the skin back carefully, so as not to break it or the crop, the crop can be removed by cutting the part that holds it to the intestines of the neck after it has been loosened.

The next thing is to remove the intestines: to do this, turn the fowl again on its back and loosen the intestines at the back with your fingers, making first a cut at the end of the

breastbone. Loosen the lungs and heart at the cut made by the crop. Now remove, with care to keep them entire, the intestines and gizzard, taking them together through the opening at the breastbone. Take your knife again, and cut around the large intestine. Finally cut the oil-sack from the rump, and remove any blood-stains from the inside with a damp cloth.

Stuffing, if desired, should be put in, and the vents sewn up before trussing.

TRUSSING

The trussing is a very simple process, requiring only three stitches in all to secure the fowl from being "cooked out of shape." First, make an incision in the neck, close to the breastbone, so that the skin can be turned back; press the wings back over this skin, and secure them into shape with the first stitch. Holding the legs down close to the side, take the second stitch right through the fowl, bringing the needle back over the leg joints and tying on one side.

Next, after working the skin skilfully over the end of the leg-bones, take the third stitch, fastening the legs to the rump by sewing them against the side of the breastbone.

The method of cleaning described above is applicable to every variety of poultry. With

Trussed Turkey for Baking

Trussing on Back of Turkey

Chicken Cut up for Fricassee

ducks and geese, the gullet may be removed at the lower vent after being loosened at the neck.

The gizzard, the liver, and the heart are called *giblets*. The blue skin must be stripped off in order to open the gizzard, then the fleshy part is removed on one side at a time. This is the only proper way to do, as there will be a very disagreeable taste if the gizzard is merely turned inside-out after being cut in two.

TURKEYS

The choice hen turkey—always a young one, of course—should have a broad, plump breast, black legs, and white skin. The neck should be short.

Turkeys and capons are singed, drawn, and trussed after the manner prescribed for chickens.

DUCKS

Tame ducks should be penned as recommended for chickens, for at least ten days before being killed. In order to give them the best flavor, they should be fed for a week or so on finely chopped celery or other spiced food.

In selecting a duck, see that it has a plump breast, without being over-fat. If the duck is young, the lower leg will be smooth, and the webbing of the feet soft. A good test is to see

if the under bill is soft; this should break readily when bent.

Singe and clean as described above. Only two stitches are needed in trussing; one to confine the legs close to the side, the other to fasten back the wings.

Of *wild ducks,* the canvas-back is the favorite. The head feathers are smooth and short. The male has chestnut-colored head and neck, grayish sides and back, with black wings and tail, white underneath. In the female the tints are duller, with fainter markings. The head is short, with red iris, and very long, dark-greenish bill.

Canvas-backs and red-heads are always sold with the feathers on.

GEESE

A goose should not be over three years old. When young, the bill and webbing of the feet are as described in the case of young ducks; the legs are yellow and have soft down on them.

Geese require to be cooked slowly, as they have much fat directly beneath the skin.

PIGEONS AND SQUAB

Young pigeons have very plump breasts. As they fly more than most of our domestic fowl,

the breast grows small, and the muscles hard with age.

A full-grown pigeon, being rather tough, is best served "potted"; the moist, slow method of cooking softening the meat.

Squab is young pigeon, and is a real delicacy. The intestines are removed after splitting down the back, and the breastbone is broken with a strong knife or heavy utensil. They should be baked for an hour in a very hot oven, or broiled as spring chicken, and served on toast after the manner of quail. Admirable for a convalescent.

GUINEA-FOWL

The excellence of guinea-fowl, when properly cooked, is something that should be more generally recognized.

Their eggs are also far better than hen's eggs.

The flesh of the guinea-hen is all dark, and indeed in other respects these birds seem more like wild than domestic fowl.

HANGING GAME

All of the wild creatures included under the head "game," having red meat, should be hung for a week or ten days in a dry, cold place before being cooked.

It is better to " draw " fowls first, but the feathers may be left on while hanging, if preferred.

The meat of all varieties of game is easily digested by invalids, since these animals store the fat outside of the lean meat, and acquire fat much less rapidly than do the domestic varieties.

VENISON

The important point to remember about venison is that it must be served and eaten immediately after cooking. If allowed to stand at all, the meat immediately becomes difficult to eat. Cooked in the chafing-dish, and eaten at once, it is very fine.

Venison can be left in a cold place better than domestic meat, as it comes healthy and tender from the deer.

Venison is sometimes cured after the manner of curing mutton hams.

BELGIAN HARE AND SQUIRREL

Belgian hare is becoming more popular, especially in the West, and is often eaten as " boned turkey," from tins. As its fur is valuable, this is always removed before the animal appears for sale in market. No animal is cleaner, and for the sake of the fur it is well

nourished, which improves the flavor of its flesh as well.

The meat is tender, white, and firm, and the broth made from it is said to be better for invalids than almost any other. The meat is used in as many ways as is chicken, even to salad.

The meat of ordinary rabbits and of squirrels may also be cooked in the same variety of ways, remembering, however, that rabbit flesh must be cooked slowly and long, on account of its density, in order to render it digestible.

LESSON IV

FISH

Although the fish is an inhabitant of water and cannot live out of it, the amount of water in the flesh itself is only slightly higher than that of meat; one hundred pounds of fish without bone containing from 75 to 85 per cent. of water; whilst meat from a healthy land-animal contains about seventy-five to eighty. A few, especially oily fish, contain an extra 10 per cent. of fat, and that much less water.

FISH ANALYSES SHOW:

	A White Fish (Flounder)	A Very Oily Fish (Salmon)
Water	80.4	64.0
Fat	2.0	12.2
Salts	3.6	1.8
Nitrogenous matter . .	14.0	22.0
	100.0	100.0

Fish, therefore, belongs to the class of nitrogenous foods which build up and repair flesh and tissues, but, although having almost as much nitrogenous or proteid matter as meat, it

is not so nourishing, for a larger proportion of the proteids is in the form of gelatine, which is less valuable to the animal economy than is albumen, of which the nitrogenous part of meat is almost entirely composed.

Fish contains more phosphorus than meat; the active fish, like trout and pickerel, having the greatest percentage.

Fish is well adapted for persons whose physical labor is not considerable, and the constituents lacking can easily be supplied by an intelligent caterer, who would serve potatoes and cucumbers or lettuce with French dressing, to make up the deficiency of carbo-hydrates and fats.

Fish with pink or dark flesh have fat distributed through the whole body, and are in consequence more difficult of digestion, but they contain more nutriment, and better supply the needs of a strong, active man; such fish are salmon, sturgeon, catfish, and mackerel.

Fish white of flesh, like the flounder and English sole, are most easy to digest and serve for invalids and persons of delicate organization.

Stale fish and those kept in cold-storage are not wholesome, nor do they retain their flavor, and it is better to be satisfied with those in season. They have a plan abroad of catching

fish in nets and keeping them alive until sold, which is a most wholesome one.

In Purchasing Fish choose only those in which the flesh is thick and firm, the scales bright and stiff, the eyes full and prominent.

Cleaning Fish.—This is usually done by the fishmonger and varies according to the fish dealt with. The gills, liver, intestines, etc., are first removed; often some skin; then portions of the fins and sometimes the head. These cuttings often equal the remaining flesh in weight and nutriment, and a clever cook will make from them a concentrated liquor which can be utilized to enrich the sauces served with the cooked fish. French and English cooks have several excellent soups and stews made entirely from these cuttings. More bones can be removed without breaking the flesh than is commonly done, and much trouble saved the guest.

METHODS OF COOKING FISH

BOILING FISH

This is rather wasteful, as so much of the nutriment and juices of the fish is lost in the process; never less than 5 per cent., and as much as 30, going into the water in which the fish is boiled. To reduce this loss to the minimum the fish should be placed in absolutely boiling water

containing plenty of salt, which seasons and also keeps in the nutriment. The fish should be washed well in cold water, rubbed with salt, wrapped in a cloth, and dropped into the boiling water; a slice of onion added and allowed to simmer gently for ten minutes to each pound weight; then carefully lifted out, drained, and the cloth unfastened. Boiled fish is garnished with parsley and slices of lemon, and served with boiled potatoes or potato-balls, lettuce with French dressing, or cucumbers, and either sauce Hollandaise, shrimp or oyster sauce, or plain drawn butter in a sauce-boat.

From the cold boiled fish, left-over fish cutlets, devilled fish, creamed fish, salad, or croquettes can be made. Steaming fish is far more economical than boiling. A simple steamer consists of a cylinder with perforated bottom which can take the place of the lid of a saucepan, when that is removed. The saucepan is kept supplied with boiling water until the fish placed in the upper compartment is cooked; about twenty minutes will usually suffice, or until the fish easily removes from the bone. By this process far less of the nutriment is lost. Garnish the same as boiled fish. Large fish are the ones usually boiled or steamed.

FRYING

By frying is not meant the work in the ordinary household frying-pan, from which the most greasy, unpalatable, and indigestible dishes are turned out. Frying means immersion in oil or fat at a temperature of 360° Fahr.

Well-clarified beef-dripping is the best fat to use; lard the worst, as it is easily absorbed and leaves the fish greasy; olive is the best oil, but a cocoanut product called "Konut," and several cotton-seed oils, are good.

Small fish are the ones most often fried, but cutlets of larger fish are often used. The fish are washed and cleaned, washed again and wiped dry inside and out. Sufficient oil or fat must be put in the pan to completely immerse the fish.

Brush the fish or portions with egg beaten without separating, and cover with bread crumbs made as fine as possible. Heat the oil, and before placing the fish in it test the temperature by throwing in a crumb of bread; if it browns in half a minute the oil is hot enough, and it must not be heated until it smokes.

Put the prepared fish into the wire frying-basket and place them in the oil, and when they are browned and the outside crisp, lift out and drain on blotting paper in a hot place.

Dish fried fish on a folded napkin and garnish with lemon and parsley. The egg-and-crumb coating forms, as soon as it touches the hot oil, an impenetrable coating which keeps the oil out and the fish juices in; the crumbs are made very fine so that little oil may be absorbed by them, and the fish does not become greasy.

FILLETS

Whitefish, rock or black bass, flounders, or the English sole give the best fillets. The fish is cleaned and scalded and the flesh removed from the bone by drawing a sharp knife on each side of the bone the length of the fish.

The flesh is cut into strips an inch wide, the strips rolled over and fastened with a skewer. The fillets are now immersed in the hot oil as in frying, and in three or four minutes will be cooked. They are drained on blotting paper, and served on a napkin, garnished with parsley and lemon.

FISH FRICASSEE

Take a pound of fish, cut the cleaned fish into pieces about an inch and a half square and put in a saucepan 2 tablespoonfuls of butter, and a chopped onion, and cook until the onion is soft. Put in the fish, cover the saucepan and cook for ten minutes, and then pour over it a pint of

strained tomatoes; add a teaspoonful of salt, half that amount of pepper, a tablespoonful of chopped parsley, cook for five minutes more, and serve. This is good for yellow perch or black bass.

For a pleasant change, salmon may be fricasseed in the following way. Put small pieces of salmon (about an inch square) into a pan with half a cupful of water, a little salt and white pepper, 1 clove, 1 bead of mace, 3 pieces of sugar, 1 shallot, and a heaping teaspoonful of mustard, mixed with half a teacupful of vinegar.

Let this boil up once and add six tomatoes peeled and cut into tiny pieces, a few sprigs of parsley, finely minced, and a wineglassful of sherry. Let all simmer for three-quarters of an hour. Serve hot, and garnish with toast cut in triangular pieces.

BAKED FISH

Open the fish at the gills and draw all the intestines through the opening; clean the inside. Stuff the fish with a mixture of breadcrumbs, butter, and parsley, the beaten yolk of an egg with salt and pepper, and sew down the head firmly, or if pork is used, make gashes down to the bone two inches apart and fill these gashes with larding-pork; dust the fish thickly

with bread crumbs, pour a little water and some butter over it and bake as you would a fowl, with frequent bastings for an hour or hour and a half. Lift out carefully with a long fish slice and garnish with slices of lemon and water-cress.

Bluefish is usually served with tomato sauce, but an excellent sauce for most fish is made from the gravy in which the fish was baked; a large tablespoonful of catsup, a tablespoonful of brown flour moistened with water, the juice of a lemon, and a glass of sherry or madeira. It is served in a sauceboat. This method serves for bluefish, shad, and all fish except carp, which is treated a little differently.

Clean the carp as before; wash the flesh all over with vinegar; let it stand for fifteen or twenty minutes. Fill the fish with bread-stuffing and sew down the head, then brush the fish all over with egg and cover it thickly with bread crumbs, and put over it a few lumps of butter. Place the fish in a granite pan with two chopped onions, a bunch of parsley, a cup of water, with a teaspoonful of Worcestershire sauce, and a teaspoonful of anchovy sauce, if you have it. Bake in a moderate oven for an hour with frequent basting. Lift carefully out when done, garnish with parsley and lemon. For sauce, use the liquor from the baking-pan, and to it

add a tablespoonful of butter and one of flour well rubbed together; make up to half a pint with boiling water, turn the whole back into the pan, cook for a moment and strain; add the juice of a lemon, season with salt and pepper, and serve in a sauceboat.

For establishments having an open fire the plan of roasting produces a dish which shows the fish at its best. The fish after cleaning is put in a shallow pan which fits in a Dutch or American oven, is lightly spread with butter, roasted in front of a clear fire, and basted with its own juices. The whole flavor of the fish is retained, and the action of the fire browns the surface and gives the appetizing flavor known as "tasting of the fire."

BROILING FISH

The fish is scaled, split down the back, washed, dried, and dusted with salt and pepper. The middle thin portion is folded over to give an even thickness, and the fish placed on a wire broiler. Butter is brushed on the flesh side, and it is held near a perfectly clear fire until nicely browned, then turned and browned on the skin side. Then for twenty minutes it is slowly broiled on the flesh side at a distance of six or eight inches from the fire, raised on a couple of bricks or a broiler-stand, and afterwards on the

skin side for ten minutes; care being taken not to burn it. The fish is finally basted with butter and should be served at once.

To broil on a gas stove, prepare the fish as above and put under the flames in an iron baking-pan, and when it is very hot grease lightly with butter. Put the fish in skin side down, baste with butter, dust lightly with salt and pepper and put it under the flame in the broiling oven on the very bottom of the stove, turn the lights down as low as possible, and broil slowly for half an hour. Lift out carefully, spread butter over it, sprinkle with a little lemon juice, serve quickly.

For broiling with an oil stove the oven must first be made very hot, the fish prepared in the same way, and a long baking-pan put over a strong flame. When the pan is hot, put in a little butter, and place the fish skin side down, afterward baste with butter and sprinkle with salt and pepper. Put it into the oven near the top and cook for half an hour, basting with melted butter once or twice; serve when brown.

If a narrow, heavy iron pan or a narrow, long asbestos mat be placed on the lower shelf over the flame, the heat will be driven round the sides to the top of the oven, and reflected from the top on the fish, which will then brown on the upper side.

PLANKED FISH

The fish is cooked on a hard wood plank, oak, hickory, or ash, about an inch thick, to fit the oven like a shelf, and rather wider than the fish.

Shad is most often planked, though any white-fleshed fish is good cooked in this way.

To plank with a gas stove, the plank is well rubbed with salt and made thoroughly hot. The fish is split down the back, washed, wiped dry, basted with butter, and dusted with salt and pepper. It is put on the plank skin side down, folded back into its natural shape, and placed under the gas stove as far away from the flames as possible. The lights are turned rather high until the fish has a good color, when they are turned down and the cooking continued slowly for thirty minutes, garnished with parsley and lemon, and served on the plank.

The fish is often surrounded with a pattern made by squeezing mashed potato through a tube and putting back in the oven until the potato is brown.

To plank in an oil stove, make the stove very hot, put in the plank with the side on which you will plank the fish turned down. After the plank is hot proceed as with a gas stove, except that the heat is kept full; the fish is near the

top on the upper grate, and an asbestos mat is put on the lower grate to drive the heat around and on top of the board as in broiling.

Plank in a coal stove the same way, but be sure that the plank is hot before placing the fish on it, and cook as near the top of the oven as possible.

Fish is very fine planked before a wood fire. The board is made hot, the fish prepared as before; attached with two nails driven through the head and one through the tail, then reared up in front of a good clear, strong wood fire, basted occasionally with melted butter and cooked for at least half an hour until the fish is a nice dark brown.

DEVILLED FISH

For this the left-over cold, boiled fish may be used, or a pound of fish boiled on purpose.

It is separated into good-sized flakes, and the following ingredients then prepared. A tablespoonful of butter is rubbed into the same amount of flour; half a pint of milk is added and stirred on the stove until boiling; 3 hard-boiled eggs are chopped very fine with a tablespoonful of parsley, salt, and pepper; the fish is carefully mixed in. Fill small oyster or clam shells with the mixture and, when cool, cover the top of each with beaten egg, dust with

bread crumbs, carefully filling in the edges between the shells and the mixture. When it is time to serve put them, a few at a time, into the frying basket and immerse in hot fat. Serve with cucumber sauce or sauce tartare, or plain.

SMOKED AND CURED FISH

Prepare a curing mixture of one pint of Liverpool salt, a pint of best brown sugar, and an ounce of saltpetre mixed well together. Scale and wash 20 pounds of fish, and wipe them perfectly dry, not allowing them to remain in water for an instant. Rub the fish thoroughly inside and out with the mixture, and place them on top of one another on an absolutely clean board, and above put another board with a weight of at least ten pounds. Leave them in a cold place for sixty hours; drain, wipe each dry; stretch open and fasten with small crossed sticks. Put in the smoking-house for five days, or instead of a smoking-house take a barrel with the ends knocked out, make a smothered fire in the bottom with a few chips of hard wood. Lay the fish on sticks across the top when the fire is lighted, throw a cover over the open end, and allow the fish to smoke.

Whitefish, shad, mackerel, and roe-herring are all cured in this way.

SALTED FISH

Salmon, shad, mackerel, or whitefish are the best adapted for salting. The fish are cleaned and scaled, washed and wiped quickly; then put in a perfectly clean sack, covered with cold brine, strong enough to float an egg; a small board placed on the top with a weight will keep the fish under the brine.

AMERICAN FISH

The *cod* is perhaps the most common and most useful fish consumed in America. It is caught in enormous quantities in the cold waters of the Labrador current along the northern coasts. It is an excellent-tasting fish, fries well in slices or fillets, but is never baked. The tongue, sounds, and swimming-bladders are used as special dishes. Isinglass is made from the swimming bladders, and cod-liver oil from the liver. Cod is in season all the year round, but best in winter. *Haddock* is very similar to cod, but not so useful, as it has such a large head, which is entirely waste. Like cod it is a winter fish.

The *halibut,* closely allied to the European turbot, is about the largest fish brought to the market, and is cut into slices and sold at about twenty-five cents a pound, and being solid flesh,

with little waste, is economical. Young halibut, weighing about twelve pounds, are sold whole as "chicken halibut." Halibut is in season all the year, but finest during winter.

Salmon is one of the best of all fish; it is a strong, rich food with a flavor entirely its own, though this flavor is only properly known in places where the fish is caught, for in sixteen or twenty hours after death, the delicate oil, to which the flavor is due, begins to decompose, and the fish, though still fine, is not the same.

Salmon is usually boiled whole or in slices, or may be sliced and broiled; or planked and served with sauce Hollandaise is the premier dinner dish. Salmon being caught in so many places at different times of the year can be obtained at all times, but in the East it is finest from March to June, when caught in Maine and Canada, whilst in the West salmon is best from October to March.

The *flounder,* the American counterpart of the English sole, is an excellent baking fish, but not so delicate as the sole. It is good fried in fillets or dished *au gratin.*

Flounders are best in May. The *shad* is a very popular fish, which is largely planked, but very good broiled; it should not be fried, as it already contains too much oil. Shad is in season from February until the middle of June.

Bluefish is almost always baked, and makes a fine dish. It is in season from April to the middle of November.

Sheep's-head, weakfish, sea bass, and *porgies* are all excellent fish for planking, broiling, or boiling, and are in season from March to October, but best about May.

The *whitefish* from the Great Lakes are excellent all-round fish when fresh from the water. Planked they are better than shad. They also come in about March and go out early in November.

In Southern waters are found the *red snapper,* Spanish mackerel, king-fish, mullet, and pompano, the latter called the king of all fish, and when properly boiled it tastes like a young chicken: it is finest in May; the snapper is also fine boiling fish, and good from April to October; the king-fish is excellent in any style. The Spanish mackerel is at its prime in September.

Brook-trout open on April 1st, and reach their finest condition in May.

Fish like herring and porgies, full of bones, are usually rolled in bread crumbs and fried. Boneless salted herring makes a good appetizer for beginning a lunch.

Fish without scales, eels and catfish, are not wholesome unless taken from very clear water.

They are skinned, dipped in egg and bread crumbs, and fried.

The *sturgeon* is the largest fresh-water fish and is very nourishing indeed, though rather harder of digestion than most other fish.

In general, *cod, haddock,* and *halibut* are winter fish, and finest in that season, whilst all others are summer fish and arrive at their best before September.

Many summer fish are, however, sent up during winter in refrigerator cars, and though not in the finest condition, are quite edible.

Crustaceans and *Molluscs.—Lobster, prawns,* and *crayfish* are the chief American crustaceans found on our tables, but, though very popular, they are very difficult of digestion through the character of the flesh. They must be fresh and alive when cooked. If they die before cooking they are most dangerous. They are in season during summer, and should be avoided after September. *Soft-shell crabs* are the ordinary crab caught as it is shedding its shell, and no crustacean is in a healthy state at this period, but the palates of many people have been trained to like the flavor, and they are in great demand.

The molluscs, of which *oysters* and *clams* are most consumed, come also under the head of

dangerous foods, as they are perhaps as unclean as any animal food and are frequently fattened in most questionable places. Nevertheless, so far does taste overcome hygiene that they are eaten alive, intestines and all. Many cases of typhoid have been directly traced to the eating of raw oysters.

When cooked the germs are killed and the risk of transmitted disease avoided.

BROILED FISH

Prepare an oily fish, like shad, mackerel, herring, bluefish, salmon, or butterfish, since they do not become dry when broiled.

Remove the head and tail from a small fish and split it down the back. If a thick fish is used, cut it across the bone into inch slices, and remove the bone. A whitefish must be rubbed with butter, because its flesh is dry.

Grease a wire broiler, lay in the fish, hold the thickest side next a clear fire and brown the flesh side first, raising it a little occasionally, so that it may not burn. Turn it, and cook the skin until crisp. Keep turning it, until the flesh is firm. Slip it on a hot platter, with the skin side down, and season with salt, pepper, and a little lemon-juice, if liked. Sliced lemon or pickles are usually served with fish.

BAKED FISH

A fish weighing from 3 to 6 or 8 pounds may be baked, or stuffed and baked. Wipe the fish, cut off the head and side-fins. Fill with stuffing, sew together, and cut gashes two inches apart in the sides. Place the fish upright in a roasting-pan, skewering or tying it into the shape of an S. Put bits of butter or dripping, or thin slices of fat, salt pork in the gashes, under the fish, and in the pan. Dredge the fish with flour, and bake in a hot oven. When the flour is brown, baste with the fat, and continue to baste once in ten minutes. Cook until the flesh is firm, and, on being touched, separates easily from the bone. Remove from the oven, take out the skewers or strings, lay the fish on a hot platter, and serve with fish sauce or tomato sauce. In serving a fish cut the flesh into neat pieces, two inches wide, lift it from the bone, and place it on the plate. Do not cut through the large bone.

STUFFING FOR A BAKED FISH

1 cup fine bread or cracker crumbs; 1 teaspoonful chopped onion, scalded; ¼ teaspoonful salt; ¼ teaspoonful pepper; 1 teaspoonful lemon juice; ¼ cup melted butter; milk or water to moisten.

Mix the ingredients thoroughly. Use enough liquid to make the stuffing stick together. If a dry stuffing is preferred, omit the milk or water. Dry stuffing is sometimes spread over a slice of fish before it is baked. The above quantities are sufficient for a fish weighing from 4 to 6 pounds.

FISH SAUCE

2 cups water, milk, or fish-stock; 4 tablespoonfuls butter; 2 tablespoonfuls flour; ⅛ teaspoonful pepper; ½ teaspoonful salt.

Put 2 teaspoonfuls butter in a saucepan, and cook the flour in it. Add the boiling liquid, the remainder of the butter in small pieces, and the salt and pepper. Boil five minutes and serve. This is sometimes called *drawn butter sauce.*

EGG SAUCE

Chop 2 or 3 hard-boiled eggs, and stir into the fish sauce.

BOILED FISH

Lay a slice of fish on a plate, place the plate in the centre of a square of clean cloth, and tie the four corners loosely together. Place it on a stand in a kettle of boiling salted water, and let the water simmer. Allow twenty minutes to each pound. Lift it out, untie the cloth, and if the flesh is firm and separates easily from the

bone, it is done. If not done, simmer longer, and examine it once in ten minutes. Serve with egg sauce, fish or tomato sauce.

CREAMED FISH

1 cup cold, baked or boiled, fried or broiled fish; 1 cup white sauce; 2 tablespoonfuls bread crumbs.

Remove the bones, skin, and brown crust from the fish. Flake the fish, mix it with the hot white sauce, pour into a buttered dish, sprinkle the crumbs over the top, and brown. If liked, ½ teaspoonful onion may be cooked in the white sauce, and 1 teaspoonful chopped parsley may be added to it before mixing it with the fish.

SALT FISH-BALLS

2 medium-sized potatoes; ⅔ cup shredded codfish; 1 even teaspoonful butter, melted; ½ egg, or 4 teaspoonfuls beaten egg; sprinkle pepper; fat for frying.

Pare, quarter, and boil the potatoes. Measure the fish, which contains no bones, and is cut fine and packed in salt. Soak the fish in cold water ten minutes to draw out the salt, and press it well in a fine strainer to make it dry. When the potatoes are soft, add the fish and shake them over the fire to dry them. Mash, add the seasoning, butter, and beaten egg. Mash all

together, shape on a tablespoon, or roll into round cakes, fry in deep, hot fat, drain on clean brown paper and serve hot, arranged neatly on a hot platter. In place of the ⅔ cup shredded fish, ½ cup ordinary salt fish may be used. Wash it, remove the bones, cut into small pieces, and cook with the potatoes. The great advantage of the shredded fish is that it does not need to be cooked, and so does not cause any odor of fish in the house. Cold, cooked fish, with the bones removed, and separated into fine flakes, may be used instead of the salt fish.

FISH CHOWDER

1 pound cod or haddock; 1 even tablespoonful dripping; 1 small onion; ½ teaspoonful salt; sprinkling of pepper; 2 potatoes; 1 tablespoonful butter; 1 tablespoonful flour; 1 cup milk; 2 crackers.

Put the fish-head, bones, fins, and skin into 1 cup cold water, and simmer to extract the nutriment. Brown the onion in the dripping. Pare and slice the potatoes, and parboil five minutes to remove the bitter juice. Strain the water from the fish-bones, add it to the potatoes, scrape in the browned onion, and add the salt and pepper. When boiling, add the fish, cut in inch pieces, and simmer from ten to twenty minutes, until the potatoes and fish are done. Cook the butter,

flour, and milk together to make a *white sauce,* add to the chowder, boil up once, add the crackers broken in quarters, and serve in a hot dish.

OYSTERS

TO PREPARE OYSTERS FOR COOKING

Take up each oyster separately in the fingers and remove all bits of shell or seaweed. Strain the liquid through a fine strainer, so that it may be used if desired.

PANNED OYSTERS

25 oysters; 1 tablespoonful butter; ¼ teaspoonful salt; sprinkling of pepper.

Put the oysters in a saucepan without any water. Shake them over a moderate fire until they look plump and the edges are curled. Add the butter, salt, and pepper, and stir the seasoning in well. Serve in a hot dish. If liked, they may be served on slices of toast, or with croutons in the dish.

CREAMED OYSTERS

25 oysters; 1 cup white sauce.

Pick over the oysters and cook them in a saucepan, as directed for *panned oysters.* Drain them in a strainer; make the white sauce,

and stir the oysters into the hot sauce. They may be served on toast, or bread crumbs, browned in butter, may be sprinkled over them. ⅛ teaspoon celery salt, and a sprinkle of cayenne pepper, or 1 tablespoon chopped parsley, may be added to the sauce if desired.

OYSTER STEW

25 oysters; 1 cup milk; 1 tablespoonful butter; 1 tablespoonful flour; 3 allspice; ½ teaspoonful salt; ⅛ teaspoonful pepper.

Pick over the oysters, strain the liquor, and put it on to boil. Cook the butter and flour together, and add the liquid gradually to make a smooth sauce. Add the milk and the seasoning, and when it comes to a boil, add the oysters and cook slowly, not allowing them to boil, until they are plump and the edges are curled.

SCALLOPED OYSTERS

25 oysters; 1 cup cracker or bread crumbs; ⅓ cup butter, melted; salt and pepper.

Prepare the oysters. Mix the butter and crumbs. Butter a baking-dish and sprinkle part of the crumbs in it. Spread in a layer of oysters and sprinkle a little salt and pepper over them. Then put in another layer of crumbs, then oysters and seasoning, and finish with a layer of crumbs on the top. Pour in 2

or 3 tablespoonfuls, or more if liked, of the oyster liquor, or milk, to moisten the crumbs. Bake in a hot oven about 20 minutes, until the crumbs are brown.

If dried crumbs are used, 1 cup or more of liquid may be needed.

FRIED OYSTERS

Pick over the oysters, drain them in a strainer, lay them on a clean cloth, fold the cloth over them, and pat them gently to dry them. Shake salt and pepper over them. Beat an egg and stir into it 1 tablespoonful cold water or milk. Sprinkle some fine crumbs with salt and pepper and lay them in a shallow dish. Dip the oysters in the crumbs, then in the beaten egg, and again in the crumbs, covering them all over each time. Fry them in deep, hot fat, drain on brown paper, and serve hot on a hot dish.

BROILED OYSTERS

Prepare the oysters, butter a wire broiler, lay in the oysters, hold them over a clear fire, and turn them every ten seconds until they look plump and curled up at the edges. Butter, and serve hot on a hot dish.

LESSON V

MILK

Practically, in speaking of milk, we have in mind cow's milk. But it must be remembered that in some countries the milk of other animals is used as food; as that of goats, of asses, and of mares. The latter is used in the preparation of fermented milk, known as Koumiss, which is properly a medicine rather than a food.

We have already considered milk as to its essential constituents, caseine, butter, sugar of milk, and salts. There are a few other properties which it is useful to know about.

Milk is an article of food which changes with remarkable facility. Even when handled with the greatest care, it carries in it germs from the air which cause it to undergo quickly a remarkable modification. Under the action of the ferment of sour milk it becomes more and more acid because a part of the sugar of milk is transformed by this germ into lactic acid. When the quantity of acid has reached a certain limit, this acid coagulates the caseine and causes the cheese of the milk to pass from a

liquid state to that of solid particles. We say then that the milk is curdled or sour. This acid fermentation is more common at the ordinary temperature than when near the freezing point. That is why milk curdles more easily in summer than in winter. This accidental souring of the milk is retarded by scalding the milk, for the heat kills the germ. But sometimes the effort to save the milk may only hasten the process when the quantity of acid formed is not sufficient to sour the milk when cold, but is sufficient to coagulate it when heated.

We can understand from this that in the art of cooking, milk does not go well with an acid, or an acid food, especially if heated.

Milk passes through another sort of coagulation: that which occurs shortly after its passage into the stomach. The gastric juices of the stomach secrete an acid which is very likely to coagulate the milk. This is a perfectly natural phenomenon, and we are not justified in regarding such changes as accidents, or an indication of disordered digestion. For the first duty of a healthy stomach is to turn the milk which it receives. That is also why cheese-makers use the " rennet," which is the fourth stomach of calves, to coagulate the milk to make cheese.

The rapid change which milk undergoes, and

the danger which it may present as a means of communicating certain affections, such as tuberculosis, should invariably be met by sterilization. Much might be said upon this point, but, as the only means of sterilization that is practical in the kitchen is boiling, we will confine our attention to that form. This method of sterilization is very effective, provided that the process of boiling is continued for several minutes. When the milk rises for the first time, the phenomenon is not due to boiling, but to the escape of gas, for the milk has not yet reached the boiling point, and the dangerous germs are not yet killed. It is then necessary to remove it from the fire and stir it, and then to replace it as soon as the foaming has subsided. It will be found that after rising several times it will settle down to a steady and quiet boiling.

There is 88 per cent. of water in good milk. Yet it is a complete and perfect food for the new-born, provided that such receive the milk of its own species. The milk of the cow is three times as rich in albumen as the human milk. Hence we see the advisability of diluting cow's milk when fed to very young children. The milk of the dog is over five times as rich in albumen as the human milk, and that of the hare, seven times. These great differences explain the enormously rapid increase in weight of the

young in their first days. Thus a child doubles its weight in 180 days; a calf in 47; a pup in 9; and a young hare in 6 days.

A great inconvenience of an absolute milk diet for an adult is the very large quantity of several quarts which would be needed. This would not become repugnant, but would fatigue the digestive tube; but even if such diet could be borne it would be found that the subject would soon become pallid, weak, and sickly. Just why is not known, but it is evident that while it is a perfect food for the young, milk is unfit for the adult. Among the materials which it lacks must be mentioned iron. It is one of the weakest foods in this respect that are known. The new-born is adapted for this state of things, for he brings with him from the moment of his birth a supply of iron which he uses little by little during his period of nursing. Physicians are agreed that children which nurse for fifteen or eighteen months or two years, as is the custom in Russia and in Southern Europe, are unhealthy, flabby, anæmic, and are long in walking.

In spite of these inconveniences milk is an important factor in our nourishment, since it supplies what would otherwise be deficiencies by its addition to other foods.

The digestibility of milk is in general very

good. When a quart of milk was taken it was found that all of the sugar of milk was absorbed, and only 6 per cent. of the albumen and 4 per cent. of the butter escaped.

BUTTER

The rapidity with which milk undergoes a change caused man, very early in history, to extract from it the nutritious matters which it contains, and which are capable of being kept for a much longer time.

Butter is frequently adulterated with other fats, and especially by oleomargarine. The detection of these adulterations is often very difficult. One of the surest methods is to know whence or from whom the butter is procured.

Butter that is badly washed becomes acid and rancid. Such butter is kept only by being heavily salted, which renders it unfit for table use. Its last resource is for cooking purposes. But it must be remembered that much food is spoiled by cooking with over-salted butter.

The cheaper grades of butter contain a very high percentage of water, and are not at all economical; for it hardly pays to buy water, even at the price of cheap butter.

CHEESE

Human ingenuity has addressed itself with rare success to the preparation of the different varieties of cheese known to the modern gourmet, and with which the palate, jaded by a long course of delicate viands, is again sharpened for that final taste which lends completeness to the feast. Of the varieties of cheese there is practically no end; each nation having more or less distinguished itself in this line of manufacture and perfected some specific brand for which a universal demand seems to have arisen.

To refer to first principles:

Cheese is generally obtained by coagulating milk with rennet, and the curds which result contain the greater part of the butter. The mass is then treated in a variety of ways; salted or spiced, and more or less compressed. In those ways cheeses of different sorts are obtained. From a nutritious point of view cheese may be classed as follows:

1. Cream, or very fat cheese, which is made from cream and rich milk, contains more butter than caseine. Gervais cheese is an example.

2. Fat cheese. This is made from rich milk and contains very little more butter than caseine. Brie and Camembert are examples.

3. Semi-fat cheese. This is made from

partly skimmed milk and fresh milk mixed. It contains much less butter than caseine. Dutch cheese is an example.

4. Thin cheese. This is made from skimmed milk and is very poor in fats.

The digestibility of cheese is very good. When it is taken in moderation it is considered to aid the digestion of other foods. On account of its richness in albumen it is of the highest class of foods.

The varieties of cheese one has the choice of nowadays are so diversified and extensive that a description of the leading kinds becomes a necessary feature of any volume dealing with the question of eating. The public taste in regard to cheese differs so widely that it would scarcely be safe to mention any particular make as being the favorite. To one Brie, to another Gorgonzola, to another Camembert, are welcome, whilst another will prefer Stilton, Neufchâtel, Gruyère, or Roquefort.

Each of these famous makes has its especial flavor and hold upon the public palate, and whilst the product of various countries, under modern systems of dairying can be made in any country, although as yet the sophistry of modern commerce has not succeeded in diverting much of the manufacture of favorite kinds from the original seats of the industry.

The making of good cheese depends upon good milk, which gets us back to the breed of cattle most suitable for the purposes of a dairy farm. It is a proven fact that the breed of a cow has more to do with the quality of the cheese than the food taken, although rich pastures are essential to the production of the highest grade of cheese. Much advantage in the quality of the milk, and consequently that of the cheese, is gained from the possession of rich pasturages for the stock. These pasturages should be devoid of flowers, particularly garlic, whilst the dairy must be constructed with the object of providing perfect ventilation, the maintenance of an even temperature, and the exclusion of every possible means of conveying a taint to the milk.

A great deal depends upon the first part of the process of manufacture in the dairy—that of the coagulation of the milk. Curd is produced in accordance with the variety of the cheese required. In the case of soft cheese the formation of the curd is prolonged, sometimes for a considerable time, whilst in the production of pressed cheese only a short time elapses. The time occupied in coagulation is determined by the quality of the milk, the condition when the rennet is added, temperature, and the strength and quantity of the rennet used. Ac-

cording to theoretical calculation the time of coagulation is in inverse ratio to the quantity of rennet employed; yet, in practice, this is not entirely borne out, although its truth is more or less obvious.

Among the popular kinds of soft cheese made in France, Brie has probably the largest number of patrons in this country. In France consumers of Brie prefer it in an advanced stage of ripeness, in consequence of which the blue cheese is taken to an underground cave, where it becomes so soft and creamy that it runs, upon the breaking of the crust, and in this condition fetches considerably more than the twenty-five cents per pound paid for it, on the average, in Paris. The Brie is a large, flat, round cheese, a little less than an inch in thickness, and averaging ten inches in diameter. Brie is never considered thoroughly ripe until the white, solid curd has become yellow and creamy. The ripening process commences from the outside.

Camembert is another of the French cheeses which have become popular in all civilized countries. It is chiefly made in the county of Calvados. Camembert was invented during the revolution of 1791, by the ancestress of a late manufacturer of Calvados.

Gorgonzola is an Italian product, and it is made from the ordinary cow's milk in northern

Italy, particularly Lombardy. The milk, as a rule, is produced by small owners of cows who manufacture the cheese, and do not perfect or ripen it, but dispose of it to merchants who finish the process in caves of their own.

Gorgonzola is produced from two curds, or, more properly speaking, from two lots of curd made at different times. The large quantity of inferior Gorgonzola found upon the market is due to the quality of the rennet used in Italy, it being scarcely anything but the actual macerated stomach of the calf. The curd, when fit for cutting or breaking, is gently manipulated with a paumarilo.

The mould-running process is an important one in connection with the finest varieties of cheese. In the part of France where Roquefort cheese is made from the ewe's milk, much pains is taken to get this properly moulded. A kind of bread is prepared, which is crumbled, and upon which mould is induced to grow, as it will readily do when exposed to a rather warm, humid atmosphere. These mouldy crumbs are mixed with the curd, and in that way amalgamate with the cheese. There is quite a system of turning the Gorgonzola cheese in the mould, and of changing the cloth upon it. The cheese is sold in its green condition in Lombardy, and when taken out of the mould is ready for the

salting-room, where it stays until covered with a fine growth of white fungus, which shows that it is ready for the salting. This process continues daily until it has been done upwards of a dozen times.

The texture of the cheese is then examined. If found too close, there is a probability that the blue mould will not grow freely. The cheese is then pierced with metal skewers to admit the air, particularly the oxygen, which is much needed by the fungi.

The best Gorgonzola is seldom seen in this country. The process of ripening it is conducted in caves specially designed for the purpose. In these caves the cheese is placed upon shelves and covered with rye-straw. The temperature is also regulated. The slower process of ripening produces the finest cheese. The ripening process takes about five months, during which the crust becomes covered with different varieties of fungi.

The leading blue-moulded cheese of England is the Stilton. The process of its manufacture varies little from that of Gorgonzola in Italy, or Roquefort in France. The Wensleydale and Cotherstone are perfect varieties of Stilton, and can scarcely be equalled for mildness and mellowness by the choicest Gorgonzola. Leicestershire, owing to its pasture, cattle and climate, is

supposed to be the most favored spot for the production of fine Stilton. Stilton cheese was formerly a most expensive article, but of late years so many have entered into the manufacture of it that the price has been much reduced.

Parmesan cheese is another expensive variety of the article, manufactured extensively in Emilia and Parma. There are also the Bondon, Gervais, Coulommiers, Pont l'Evêque, Neufchâtel, and Port du Salut hailing from France.

Port du Salut cheese is not unlike a variety known as Caerphilly. In form it is circular, flat, being an inch in thickness, and it is partially pressed. The *pâté* of the cheese is deliciously mellow, yet firm and tasty, the flavor being somewhat dependent upon the number of holes in the cheese. Port du Salut is a growing favorite with connoisseurs both in this country and abroad.

Pont l'Evêque cheese is a product of one of the leading dairy departments of France. Its name is derived from a village in the vicinity of Havre, and it is much in demand at Trouville, and Deauville, the famous French watering places. The process of manufacturing Pont l'Evêque is an elaborate one.

Gervais cheese is another delectable morsel

for the epicurean. Gervais is a mixture of cream and milk; $^1/_3$ of the former to $^2/_3$ of the latter. Coagulation is often delayed for twenty-four hours. After the whey has been removed by the curd, the firm curd is laid in a cloth, which is placed in a slatted wooden frame, from six to nine inches in depth. A heavy wooden block is then placed upon it.

Bondon cheese is produced chiefly in the rural districts around Rouen. It is made entirely from milk, about seven or eight cheeses being made from a gallon of milk.

Coulommiers cheese is made in the Brie district. It is one of the favorites of the frequenters of Parisian cafés.

In addition to the Stilton cheese, for which English makers are famed, there are many other varieties of cheese manufactured in England. The Cheddar cheese is a product of Somersetshire; Cheshire cheese bespeaks its origin. It is a rich, cream-colored variety. Leicester cheese is of a reddish color with a slightly bitter taste, added to a very rich and mellow flavor. Derby cheese is white, Wilton is pink, and Gloucester of the same hue. Cheddar cheese is another red-hued cheese, the result of the use of coloring, undoubtedly.

Next to Cheddar come the two Dutch varieties, Edam and Gouda, the former round, the

latter flat, and neither of which, in the way of quality, has any room for boasting.

The Swiss cheese is made from goat's milk, and for this there is always a large market, both in Europe and America.

Limburger is a cheese which is approached with fear and trembling by people unacquainted with it. It is claimed that this almost putrid German product is quite healthy, and that the prejudice against it is based upon ignorance.

The manufacture of cheese in the United States is an important industry. Not alone is there an excellent domestic product made in most States, which is palpably American, but there are few varieties of foreign cheese which are not produced in American factories to meet the demand of price. Gruyère is imitated in Wisconsin, and Schweitzerkäse is made in many States. Attempts to imitate the French Roquefort and English Stilton have not been very successful, although a certain factory in Maine did at one time produce a fine grade of Stilton.

As Parmesan takes three years in the curing, an attempt to make it here is not to be expected. Limburger made in this country is considerably inferior to that brought from the Netherlands. Schabdeiger is also imitated here, as well as im-

ported. Brie and D'Isigny are imitated in New York and Pennsylvania. Dainty little Camemberts, soft and white, with blue pencilling, and sometimes reddish on the outside, are made here also. The much plainer form of curd fresh-made, and sold cheaply in nearly all our markets in little cylinders wrapped in tinfoil, under the name of Neufchâtel, has been made in large and increasing quantities for fifteen years or more in New York and Pennsylvania. The same localities place in the market a soft, fresh curd, very much enriched, which is called cream cheese. This does not exhaust the list of varieties of cheese found in all good markets in this country. The standard American Factory, or Cheddar, cheese also appears in many more or less disguised fancy forms. The Canadian and American "Club-house" cheese, "Meadow Sweet," "Saratoga," and "Delicatesse," sold in one- and two-pound jars, and in smaller packages, neatly prepared, are merely good selections of common factory-make, taken at a stage of ripeness, mild or strong, to suit the taste, then worked over, pressed into suitable packages, and sufficiently enriched to make a uniform smoothness. Flavor is increased in some instances by adding a little wine or brandy. "Cheese Food" is also standard cheese, into which has been in-

corporated the natural whey, reduced to a syrup. This gives a sweet taste to the cheese, which some like, and restores the original equilibrium of the original milk components. All of these rich and fancy forms of cheese are recognized as relishes, to be used in small quantity, rather than as a substitute for food. If buyers would take a little trouble to properly care for the cheese they purchase, there would be less loss, it would be more enjoyable, and housekeepers would be more inclined to invest in such articles. A stone jar with a tight-fitting cover is a fitting receptacle. This should be placed in a storeroom or dry cellar where the temperature is maintained at between fifty and sixty degrees. This jar should be thoroughly cleansed and well aired before a new lot of cheese is put in.

Epicures advise cutting cheese like the Stilton and " Young America " across one end of the cylinder, and keeping them with the cut surface downward in a soup-plate filled with old ale. An Edam may be similarly cut and preserved. Cheeses, of the shapes last mentioned, may be cut directly in two, and then used from the cut surfaces, leaving these smooth, so they will fit closely together; the air may thus be excluded and rapid drying prevented. If cheese in large pieces or fragments becomes dry and

hard, it may be used for cooking purposes, either grated or melted, or for Welsh rarebits.

Cheese becomes a much more easily digestible and desirable article of food when cooked, as it can be in a hundred tasty and attractive ways, for which we refer the reader to our recipes here and in another volume.

Cheese is considered, from a scientific point of view, a most nutritious article of food, although, owing to the absence of potash salts, it is not suitable for a continuous diet. In comparison with meat, cheese is extremely economical from a pound-to-pound point of view.

In the selected parts of meat, *i. e.*, muscular fibre without bone, there is, in beef, an average of 72½ per cent. of water; in mutton, 73½; in veal, 74½; in pork, 69¾, and in fowl 73¾. In Cheshire cheese, and other popular brands, there is but $30^1/_3$ per cent. of water. We, therefore, have in every pound of cheese more than twice the amount of solid food that is found in a pound of the best meat, or comparing with the average of the entire carcass, inclusive of bone, tendons, and other waste, cheese will show an advantage of three to one.

Caseine, which is the fundamental basis of

cheese, contains, according to Mulder's analysis:

	CASEINE
Carbon	53.83
Hydrogen	7.15
Nitrogen	15.65
Oxygen, Sulphur	23.37

Analyses of albumen, gelatine, and fibrin by the same authority are as follows:

	Albumen	Gelatine	Fibrin
Carbon	53.5	50.40	52.7
Hydrogen	7.0	6.64	6.9
Nitrogen	15.5	18.34	15.4
Oxygen	22.0	24.62	23.5
Sulphur	1.6	24.62	1.2
Phosphorus	0.4	24.62	0.3

From these tables we may safely assume that from the view of nitrogenous, or flesh-forming, and carbonaceous, or heat-giving, constituents, the chief materials of meat and cheese are fairly equal.

One of the most remarkable facts about the manufacture of cheese is the way in which the coagulation is produced. As stated in an earlier part of the article, it is achieved by means of the rennet. This rennet is a part of the stomach of the calf, the mucous membrane,

usually salted and dried for the purpose, in the milk, and warmed for a few hours previous to using.

The most eminent authorities assume that the rennet acts primarily as a ferment, and converts the sugar of milk into lactic acid, which latter coagulates the caseine. A weak infusion made from a small piece of rennet will coagulate three thousand times its own quantity of milk. There is a coagulation which takes place in the living stomach when milk is taken as food, which appears to be due to the lactic acid of the gastric juice. Hence the plausibility of the foregoing theory.

LESSON RECIPES FOR CHEESE

CHEESE DISHES

No. 1. Prepare toast, dip in hot, salted water, grate enough dry cheese to cover the slices of toast, set in oven to melt, and put the slices together as sandwiches.

No. 2. ½ pound cheese; 1 tablespoonful butter; 1 cupful milk; sprinkle salt.

Stir all together till smooth, over a gentle fire or in a double boiler, and spread over toast.

No. 3. ¼ pound cheese; 1 tablespoonful butter; 2 egg-yolks; ½ teaspoonful mustard; sprinkling of cayenne pepper.

Stir to a smooth paste, spread on toast, and set in hot oven for four minutes. The whites of the eggs may be beaten stiff, add a sprinkle of salt, drop lightly on the toast, brown in the oven.

No. 4. 1 egg; 1 tablespoonful grated cheese; ½ teaspoonful butter or 1 tablespoonful milk; sprinkle salt and pepper.

Beat the egg, add the other ingredients, cook in a double-boiler till smooth and thickened, pour it on moistened toast. It may also be steamed five minutes in little cups, or baked very slowly for ten minutes.

No. 5. Slices of bread; 3 eggs; 1½ cups milk; 1 teaspoonful salt; 1 cup grated cheese.

Beat the eggs slightly, add the milk and salt. Soak the bread in the milk and egg till soft, but not broken. Lay the pieces in a pan, cover with cheese, bake or steam.

No. 6. ½ cupful grated cheese; 1 cup grated bread crumbs; 1 egg; ½ cupful milk; sprinkle salt; sprinkle cayenne pepper.

Butter a baking-dish, put in the crumbs and cheese in layers, or mix together; keep some crumbs for the top. Beat the egg slightly, add the milk, salt, and pepper; pour on to the crumbs, add the top layer of crumbs; bake until brown.

No. 7. 1 cupful rice; 2½ cupfuls water; 1 teaspoonful salt; 2 cupfuls grated cheese.

Pick over and wash the rice. Steam it in a double boiler, in the salt and water, until soft. Butter a baking dish, put in the rice and cheese in layers, pour on 1 cup white sauce; sprinkle over it buttered cracker crumbs, brown in the oven. Macaroni may be used in the same way.

LESSON VI

EGGS

In speaking of eggs, reference is made, of course, to those of the hen; those of the turkey, goose, and duck are more rarely used.

The weight of an egg varies considerably according to the breed of the fowl, and often in the same breed. In general the shell represents about 12 per cent. of the total weight, the white, 58 per cent., and the yolk, 30 per cent.

When we consider that the chicken is hatched from the egg, and that it has blood, muscles, nervous system, bones, etc., all analogous to ours; and that all of these are formed from no extraneous source, we must be convinced of its great nutritive properties, and of its value as an article of food. All of this is verified by chemical analysis, which tells us that an egg is composed as follows:

	Water	Albumen	Fat	Mineral Matter	Total
White of Egg	86	13	—	1	100
Yolk of Egg	51	16	32	1	100

The white of egg contains most water, and no fat; the yolk a very large percentage of fat. The white of egg is merely a solution of albumen in water. The yolk is the great nourishing part, and contains, besides, a number of salts, such as: phosphates, potash, lime, etc.

The yolk mixes readily with bouillon, milk, coffee, and imparts to all of these an agreeable flavor. A given weight of egg, say 10 ounces, contains as much nourishment as 35 ounces of milk; and is also equal to more than 5 ounces of moderately fat meat.

Eggs are less easily digested in the raw, than in the cooked state. They are more easily digested as omelets, or when scrambled. Eggs possess the quality of producing more quickly a sense of satiety than any other food. This property has never been satisfactorily explained.

LESSON RECIPES FOR EGGS

EGGS COOKED IN WATER

1. Put 1 pint boiling water in a small saucepan, let it boil a moment, put an egg into it, and remove the pan from the fire. Let it stand, covered, for ten minutes. The egg will then be soft and creamy. This process cooks the albumen of the egg at a temperature of about 180°, and makes it more digestible than if boiled.

In order to cook several eggs, a little experimenting must be done. Use a large saucepan and a large amount of boiling water, and try the eggs to find if they cook properly in ten minutes. If they are too soft at the end of the time, use more water, or let them cook fifteen minutes. If they become too hard in ten minutes use less water next time, or cook them for seven minutes.

2. When hard eggs are desired, cook as in the recipe above, but for thirty or forty minutes instead of ten minutes, and it will be best to stand the saucepan on the back of the stove that the water may not become too cool.

DROPPED EGGS

3. Break eggs, one at a time, into a cup. Put a quart of boiling water and 1 teaspoonful salt into a saucepan. Let it boil, then move it back on the stove so that it will just cease to bubble. Drop in the eggs, one at a time, and cook until the white is firm. If several eggs are to be cooked at a time, use a large quantity of boiling water and salt. Serve them on toast, with a sprinkle of salt on each egg.

SCRAMBLED EGGS

1 egg; 1 tablespoonful butter; ¼ teaspoonful salt; sprinkle pepper; ¼ cupful milk.

Scald the milk in a double boiler. Mix the egg, salt, and pepper, and beat together. Pour the hot milk into the egg, stirring well, add the butter, and stir thoroughly in a double boiler until it thickens. Serve hot on steamed rice, or on toast.

POACHED EGGS

This method is exactly like the scrambled eggs, with the omission of the milk.

FRIED EGGS

Eggs when fried are not so digestible as when cooked in other ways, because the heat of the fat makes the albumen leathery. Dropped eggs should be used instead of fried.

BAKED EGGS

1. Break eggs, being careful to keep the yolks whole, into a buttered baking-dish. Put a sprinkle of salt on each egg, and bake in a moderate oven until the white is firm, or from ten to fifteen minutes. Add a sprinkle of butter to each egg, and serve at once.

2. Separate the yolks and whites. Beat the whites until stiff, with 1 sprinkle salt to each white. Put into a buttered dish, lay in the yolks here and there, and bake until the white is a golden-brown.

PLAIN OMELET

2 eggs; 2 tablespoonfuls milk; ¼ teaspoonful salt.

Beat the eggs, add the other ingredients, stir well, and pour into an omelet pan, well buttered with 1 teaspoonful butter. Set the pan back on the stove, where the omelet will cook slowly. Lift occasionally with a broad knife to see if the albumen is hardening. When it is firm on the bottom, turn the omelet over, and cook it two or three minutes, until the other side is also firm. Slip it on a hot plate and double it over in the centre. Many persons like a speck of pepper added to the seasoning.

FOAMY OMELET

Using the ingredients in the recipe above, separate the eggs. Mix the yolks with the salt and pepper and beat, and stir in the milk. Beat the whites until stiff, and fold them lightly into the liquid. Melt 1 teaspoonful butter in an omelet pan, and heat it. As soon as it bubbles, pour in the mixture, set the pan on the back of the stove, and when the albumen is hardened so that the omelet is firm underneath, set the pan in the oven on the grate for two or three minutes to dry the top. Slip it on a hot plate and double it over in the centre.

MEAT OMELET

Mix 1 tablespoonful of ham, chopped fine, or of any meat, with either the plain or foamy omelet, and cook as directed. A little chopped parsley may be added, if desired. When the omelet is cooked, chopped meat may be spread over half the top, and it may then be folded double. Oysters, either whole or chopped, or stewed tomatoes may be used, instead of the meat.

BAKED MEAT OMELET

Prepare the foamy omelet, and add to it chopped meat, put it into a buttered pudding-dish, set it into a pan of boiling water, and bake until firm.

FLOATING ISLAND

1 pint milk; 3 eggs; 2 tablespoonfuls sugar; ¼ teaspoonful salt; ¼ teaspoonful spice, or ½ teaspoonful flavoring.

Scald the milk. Separate the eggs. Add the salt and sugar to the yolks, and beat. Beat the whites until very stiff, add 2 teaspoonfuls sugar to them, beat slightly, and drop spoonfuls of the stiff whites on top of the scalded milk. Let them cook two or three minutes until firm, lift out on a plate, and pour the scalded milk on the beaten yolks. Put this mixture into the double boiler, and stir until it thickens.

Pour it into a china or glass dish. When nearly cool, stir in the flavoring, put the whites on the top, and serve cold, as a pudding. It is a good idea to pour this custard, while it is hot, over thin slices of bread or cake. A pretty way to serve it is to put specks of jelly on the top of the whites.

To make cocoanut or cholocate custard, cook 2 tablespoonfuls cocoanut, or 1 tablespoonful melted chocolate in the scalded milk.

RICED EGGS

Cook 3 eggs in hot water one-half hour. Separate the yolks from the whites and chop the whites. Make a white sauce by melting 1 tablespoonful butter, adding 1 tablespoonful flour, and 1 cupful milk, gradually. Season with ½ teaspoonful salt, and 1 sprinkle pepper; stir in the whites and pour over slices of toast. Rub the yolks through a strainer over the whole.

LESSON VII

FOODS OF VEGETABLE ORIGIN

While the foods of animal origin, with the exception of milk, consist essentially, and especially in the simple foods, of albumen and fat; those of vegetable origin are composed of albumen and the hydrates of carbon, or starch and sugar. There are some fruits and grains also which are rich in fats, as the olive, for example.

There is another essential difference between the two classes of foods, viz.: those of animal origin are directly accessible by the digestive juices, while those not of animal origin have nutritive parts enclosed in cellulose envelopes. In cooking, these envelopes are broken and the contents exposed to the action of the saliva in the course of mastication.

We will observe the vegetable foods in this order:

1. The cereals; flours, and bread.
2. The leguminous grains; peas and beans.
3. The roots and tubercles; potatoes, carrots, and turnips.
4. Herbs and salads.
5. Fruits.

CEREALS, FLOURS, AND BREAD

The cereals upon which we are most dependent are wheat and rice. To those may be added rye, barley, and corn. These occupy the most important place in the group of vegetable foods, and their importance in the nourishment of man can hardly be over-estimated. It has been very justly said that the civilization of man began with the cultivation of grain; for that caused man to give up his nomadic life, and to take up a fixed abode.

The nutritive value of cereals is very great. This is not at all surprising if we reflect that in eating grain we are in reality eating that which in the vegetable kingdom bears a true relation to the egg of the animal kingdom. The grain of a cereal is its seed; and this is an organ which contains in itself all that goes to make up a new plant.

Wheat flour may serve as a type of all the grains. It is used almost exclusively in America in the making of bread, and in many ways in the art of cooking. It contains, besides a small quantity of fat and a few salts, water, gluten, a special sort of albumen, and starch as a carbo-hydrate. Nothing is easier than to separate these two materials; mix a little flour and water to thickness of a paste, after it has stood

a little white, mould it in the hands under a stream of running water, collect the water as it runs off, and after it has stood for a while a deposit of starch will be found in the bottom of the vessel in which it rests; the elastic, soft, grayish mass left in the hand is the gluten. Wheat flour is composed of from 10 to 12 per cent. of gluten, 72 to 75 per cent. of fat, and some salts, principally phosphates.

BREAD

If the statistical records are reliable, man finds in bread nearly half, and among the less wealthy part of the population about two-thirds, of the nourishing material which he needs. The process of bread-making is not to be described here in detail; suffice it to say that it consists in making a raised mass by the fermentation of a small quantity of sugar (which accompanies the starch) into alcohol and carbonic-acid gas. It is this latter which causes the mass to "rise." When this is cooked the outer covering, under the immediate action of the heat, is hardened into crust. The inner portion remains tender and soft.

Wheat bread is composed of:

Water, 34 to 35 per cent.; albumen (gluten), 7 per cent.; starchy matter, 55 per cent.; fat, 2.10 per cent.; salt, 1 per cent.

ROOTS AND TUBERCLES

These foods, which comprise potatoes, carrots, and turnips, are less rich in nourishing matter than are the other vegetables, since they contain from 75 to 90 per cent. of water. They are also poorer in albumen and starchy matter.

The potato occupies a prominent place among our foods. A few of the many good reasons for this may be noted. It is an abundant crop, and contains twice as much albumen, and nearly four times as much starch, as is yielded by nearly four times as much land sown in cereals. The potato also keeps very well through the year. However, towards the end of the winter the starch in the potato changes into sugar, and imparts to an old potato a sweetish taste. When the potato begins to sprout, the starch also undergoes a change into sugar. Hence the necessity of keeping potatoes not only in the dark to prevent them from sprouting, but also in a temperature neither too hot nor too cool. The potato is also capable of being served in so many palatable forms, and by so many easy processes, that it is very popular with chefs.

When a potato is boiled in water, the starchy matter swells up on absorbing water, and especially the cellular sacs themselves; consequently, while it is rich in starch it becomes on boiling

poor in water, dry and mealy. A potato which is poor in starch swells little in water, and is soft and watery after boiling. New potatoes, being imperfectly mature, are very likely to be of this nature.

Carrots and turnips are of less value as food than are potatoes.

OTHER VEGETABLES, HERBS, AND SALADS

These are mainly more aqueous than the other vegetables just noted. Water is present in them to from 90 to 95 per cent., and the nutritive matter is not more than from 5 to 8 per cent. They are, however, richer in salts or mineral matter.

FRUITS

These are quite rich in water, but rather less so than the vegetables. The albumen in them is comparatively insignificant; but they contain important quantities of starch and sugar, as well as acids, and odorous substances which are very agreeable and useful in cooking. The fruits which are richest in sugar are cherries, and especially the grape. Dried fruits are naturally richer than fresh fruits, but they are not eaten raw; and on cooking they regain the water which they lost in drying. Cooked fruits are more easily digested than are raw fruits.

By reason of the quantity of water which cooked fruits introduce into the system, they lessen the necessity for drinks, and also the desire for alcoholic drinks. Statistics prove that the consumption of alcoholic drinks is less in proportion as the eating of fruits is great.

Dried fruits such as almonds, and nuts generally, are remarkable for their richness in albumen and fat, and for the very small proportion of starch and sugar.

LEGUMINOUS PLANTS

The leguminous plants, represented by beans and peas, constitute by far the richest food which the vegetable kingdom affords. These contain as much, and even more, albumen than the richest animal food, meat, and besides yield a very considerable supply of starchy material. Few foods are as rich. Little peas, or *petits pois,* which are picked before they are ripe, contain a high percentage of water, and are very weak, in consequence, in albuminous nourishment.

CONDIMENTS AND HORS D'ŒUVRES

Condiments are ingredients which are added to foods to impart a flavor, to stimulate the appetite, and to aid digestion.

They are either simple or compound. Sim-

ple condiments are gifts of nature; compound condiments are products of the art of cookery.

Simple condiments are divided into seven classes: salt, acid, sharp, bitter, aromatic, sweet, and fat condiments.

Salt.—This is sea-salt, the chloride of sodium of the chemist; nitre or saltpetre. The latter is never used by cooks, but only in the preservation of meats. Sea-salt enters into the cooking and the seasoning of food in nearly all of the culinary preparations. It is beyond question the best and the most healthy of the seasonings. Its use is to moderately excite the mucus membrane of the mouth, to increase the flow of saliva, and to increase the appetite. There are several combinations and preparations of it, such as celery-salt, etc.

Acids.—Vinegar, lemon, etc., form the acid condiments. They should be taken only in moderate quantities, and then much diluted. They excite the salivary glands, quench the thirst, and help to render the more indigestible food, such as the mucilaginous kinds, more easily assimilated.

Sharp or Acrid.—This class includes members of the onion and garlic families, mustard, cress, radish, horseradish, peppers, Tabasco, capers, and nasturtium.

Aromatic.—Parsley, caraway, thyme, rose-

mary, sage, summer savory belong to this group.

Sharply Aromatic.—This division includes cabbage, cauliflower, ginger, black pepper, cayenne pepper, and pimento.

Sweet.—Sugar, gums, mucilages, and starches belong under this head.

Fat.—Olive oil, almond oil, oil of nuts, fats, and butter.

The compound condiments, outside of the sauces, are usually classed with the *hors d'œuvres.* These are relishes which are served at the commencement of a meal, or after the soup, before the first service, to whet the appetites of the diners. They are of infinite variety and include vegetables, fish, etc. They are butter, radishes, olives, slices of sausage or bologna, sardines, anchovies, herring (either smoked or salted), artichokes, cucumber with salad, and, above all, when the season permits, oysters.

LESSON VIII

FOOD ESTIMATES

In order to facilitate comparison of the values as food of the several articles of diet of both animal and vegetable origin, a table is here presented.

	Albumen	Fat	Starch and Sugar
Gruyère Cheese	30%	30%	—
Beans	26%	—	53%
Peas	23%	—	52%
Lean Beef	21%	5%	—
Yolk of Egg	16%	32%	—
Total Egg	12.5%	12%	—
Rice	8%	—	77%
Bread	7%	—	55%
Cow's Milk	3.5%	4%	5.7%
Potatoes	2%	—	21%
Carrots	1%	—	9%
Apples	.5%	—	13%

Cheese occupies the first place in the list for richness in albumen. After it in order come beans and peas. The richness of eggs in albumen and fat is remarkably high. Potatoes, carrots, and apples, which may be regarded as types of the other roots, tubercles, and fruits, are very poor in the respective simple foods.

This table might be elaborated, and very much lengthened; but tables are always considered rather dry methods of presenting facts. A sufficient number of representative foods is here given to show the values of the several food articles.

The process of cooking has in view the reaching of two distinct ends, and these are often attained by a single process. These are: to modify the chemical and physical state of the articles of food in order to make them more digestible; and, secondly, to impart to the food a more agreeable appearance, taste, and odor, by processes of roasting, boiling, and the addition of sauces, condiments, etc. For instance, a raw potato is almost indigestible; but when it is boiled, the grains of which it is composed are rendered lighter, and consequently more easily dissolved. The woody fibre in which these grains of starchy matter are enclosed is broken down, and the contents are more easily reached by the saliva and the digestive juices.

It is often stated that only the first of these ends is of prime importance; and that a normally healthy person requires no stimulus to the appetite created by youth, exercise, and the bodily losses. Yet we all know that one may go to a table with a keen appetite and a relish for food, and partake of badly cooked and badly

served food, rise from the table with a feeling of satiety, and still not have eaten in proportion to the real needs of the body. How often have we anticipated a meal with relish, and yet been able to eat of it, as the French say, with only the ends of our teeth. And again, how often have we approached a meal with no feeling of appetite, only to find ourselves enticed to hearty eating by the appetizing dishes. We of course know the teaching that we should not eat when we do not crave food, and while this, in a sense, is nature's warning to abstain, yet we know of many cases where the lack of desire arises from no impairment of the bodily functions, but from many other causes. How many housekeepers tire of their own cooking, and "would give anything for some one's else cooking, even though it be much inferior"! The lack of appetite is also in many cases a warning from nature that too much of one sort of food is being taken, and that the bodily needs in other directions are being ignored. Then it is that savory dishes and enticing cooking play their true part in the household economy. To all of these may be added the effects of climate, age, and occupation; to say nothing of the lack of exercise, the sedentary habits, and the jaded appetite of those in poor health. Here is a field for the active and steady influence of all of the intelli-

gence, skill, neatness, and ingenuity that a housekeeper can exert.

THE NORMAL DIET

There are three possible diets which present their claims for consideration as being normal: the animal, the vegetable, and the mixed.

The absolutely animal diet comprises only meat in its several forms, milk, and eggs. It is, of course, in practice never carried out in that extreme, for bread is always included in it. Even among savages the animal diet has always some product of the earth added to the purely animal constituents.

The absolutely vegetable diet comprises only the products of the earth to the exclusion of all food of animal origin. But in practice this diet includes also milk and eggs. This form of diet has many adherents among religious bodies, notably the Brahmins of India. There is a group of vegetarians in Manchester, England, who have adopted as their formula: V. E. M. Vegetables, eggs, milk.

By a mixed diet is meant one of meat, milk, eggs, bread, vegetables, and fruits.

VEGETARIANISM

Among the arguments in favor of this form of diet, we meet first the sentimental argu-

ment against the killing of animals, and that against eating dead things. A more serious argument is that based upon the anatomical structure of man, his late teething, the length of the digestive tract, etc., to show that he is not, by nature, a carnivorous animal. It is shown, also, that the diet of man in his earlier development was vegetable. Whole races of people in ancient times confined themselves to this form. Even miners in Chili, porters in Smyrna, and numerous others confine themselves to fruits and vegetables. Great personages in all ages of the world have practised it: Pythagoras, Newton, Voltaire, Rousseau, and Queen Elizabeth of England.

From a hygienic point of view, a vegetable diet is not so heating as is either a mixed or an animal diet. Vegetables are naturally more bulky than are meats, and take up in processes of cooking a very large quantity of water. This greater bulk is a safeguard against over-eating. They also carry with them a sufficient quantity of the alkalines or salts. There is also the very important element of lessened cost in the case of vegetables over meat. It is a fact of scientific importance that much eating of fruits tends to prevent alcoholism. German statistics prove this fact beyond doubt. We frequently hear that this or that fruit is to be re-

garded as a preventive against indulgence in liquor to excess. But the fact is that any fruit, especially those carrying an abundance of juice, together with the acids and salts of the fruit, will produce the result.

One of the greatest inconveniences of the vegetable diet is the great bulk of the food, and the large amount of indigestible cellulose which it contains. The increased bulk in time causes a strain upon the digestive tube as well as upon other organs of the body.

ANIMAL DIET

This food is very rich in nutritious matter, especially albumen and fat.

These are necessary to those who perform hard physical labor, and to those who are exposed to low temperatures. Whether or not the diet is the cause, it is remarkable that those who live upon a meat diet are strong in physical and moral energy. Among the inconveniences of such a diet may be mentioned the danger of over-eating by reason of the compactness of the food. There is also the increased difficulty of digestion. Meats and cheese are heating, and cause a harmful intestinal fermentation.

THE MIXED DIET

The mixed diet is that which is most general in society. In such a diet meat occupies a prominent place. A great deal of attention has been given to the use and value of meat by reason of its recommendation, in cases of anæmia and tuberculosis, by physicians. It must not be forgotten that while a certain quantity of it is valuable in furnishing alimentation, there is danger of poor nourishment resulting from eating too much of it. One is likely to get less nourishment from eating largely of meat than from the consumption of moderate, or even small quantities. The meat also furnishes such a variety of forms that it takes, on that account too, a prominent place in our dietary. It is also capable of such rapid manipulation that it is popular with cooks. In an emergency, what is more easily prepared than a couple of boiled eggs, or a broiled steak? These are among the tendencies which cause our mixed diet to be overbalanced. The meat, very rich in nutriment, occupying little space, and lacking the salts and alkaline matter, should be corrected by the presence of a vegetable, which will provide the bulk and alkaline matter. In this way there will result a diet which will be sufficiently rich, not excessive in volume, yet voluminous enough

to comfortably excite the intestinal contractions, and to supply the necessary mineral matter. In making up such a diet one must remember that albumen is supplied both by meats and vegetables. It is a good rule to let the vegetable supply at least two-thirds of the albumen, and the meat the remainder. When made up in this way the volume of the food is not excessive, yet is quite considerable. It is the opinion of physicians who have devoted many years to this subject, that the health is endangered if the meat supplies daily more than half of the necessary albumen. One of the greatest needs is to see that vegetables are well represented upon the table, not only by bread, macaroni, and the ever-present potato, but by green peas, and cooked, or even raw fruits. No doubt there are seasons of the year when it is difficult to do this, but whenever it is possible it should be attended to.

THE DAILY RATION

The general idea has been given of the kinds of food which should go to make up a meal. That forms the diet. The quantity of those which should go to make up a daily supply forms the ration. This daily supply of food goes to satisfy two wants. First, the need of a certain number of materials to repair the loss of

tissues, and, second, the need of a certain supply of force, or energy.

In the choice of a daily ration, one must know the conditions of life of those for whom it is prescribed. The social conditions which affect it are very complex. There is a very marked difference between the condition of life of a laborer, and one of the leisure class, or one of a sedentary occupation. In the case of a laborer, there is need of a greater supply of food to repair the waste of the tissues through muscular exercise, and also of those foods which will supply the necessary force for the daily work.

The influence of climate demands that the supply of fat be increased during cold weather, and correspondingly diminished in hot weather. Dr. Kane, the Arctic explorer, tells us that an Esquimau will drink ten or twelve gallons of train-oil a day. Inhabitants of the tropical regions, on the contrary, are known to live upon fruits all the year around. Heat is the great essential in cold weather, and that is best supplied by fats and carbonaceous matter. In warm countries man must see to it that the food is not too heating. We, too, must see to it in our own climate that the proper balance is maintained in winter and summer. In winter we need a liberal diet of meat, butter, potatoes, sugar, and similar food, while in summer these

are to be avoided. Neglect to properly adjust the food to the varying seasons is a prolific cause of indigestion and other ailments.

Another essential factor to be observed in choosing food is its digestibility. And this is a rather difficult point to decide upon, for there is no relation between the nutritive qualities of a food and its digestibility. Still another difficulty in estimating the digestibility of food, is the fact that so much more depends upon the condition of health of the consumer, than upon the food itself. A young person of good health, and taking plenty of exercise, is able to digest almost any food. But young children whose constitutions are forming, sick persons, and those of a sedentary life are very much harder to cater to. In speaking of sedentary occupation, we must discriminate between those who do a great deal of brain work and those who do not. The diet of students should be very liberal. Labor of the brain is much more exhausting to the system than is muscular labor. Therefore it is not right to hastily conclude that because a person does not perform much muscular labor, he does not require so much or such nourishing food as a laborer does. It is said that three hours of hard study exhausts the system and causes more waste of tissue than a whole day of manual labor. The only way in

which this waste of tissue can be supplied is by means of proper food. In general, it may be said that the greatest amount of nourishment is to be derived from partaking of the sort of food that one likes best, and that in the pleasantest surroundings possible.

LESSON IX

THE ART OF COOKERY

Cookery embraces a large variety of matters which call for the exercise of intelligent direction and control. It is much more than a knowledge of the actual cooking of food; one must know the seasons of the year when this or that article is not only in the market, but at its best. Economy, thrift, good digestion, and consequent good temper, are also among the subjects which the housekeeper must control. Then, too, a knowledge of the tastes and health of the members of the household offers no small part of complexity.

The choice of the menu for the day involves the recollection of preceding days, that the monotony of a too frequent recurrence of a dish may be relieved; for uncertainty in the daily diet is a potent factor in maintaining the family appetite. Much of the pleasure of the table is lost when the members of the family can foretell the menu by the day of the week. The arrangement of the menu is not a haphazard operation, and is not secured without much

study and planning. There is a necessity of utilizing the *beaux restes* of yesterday, as the French call the "left-over," without duplicating yesterday's menu. Housekeeping is no simple art, even in the humblest homes, or in families of the simplest taste.

Success is impossible in all, or indeed in any, of the household departments unless the mistress rules. No servant can direct a household; and no mistress can rule her household unless she is well equipped in the knowledge of every detail of her servants' work. It takes a cultivated, capable woman to secure the necessary economy and comfort of a home. Not one servant in ten thousand has, or can acquire, that education by which a mistress is able to make the best and the most of her resources.

MENU-MAKING

Menu-making is frequently a point of great difficulty to the average housewife. One of the best means of securing a properly made menu is to write down a list of whatever is intended to be provided. This need not be an elaborate affair, but should be clear enough to be thoroughly understood by the cook.

The three points to be considered are:

1. What was left over from yesterday?
2. What is now in the larder?

3. What is in season?

The first point is by no means to be despised, even by those housekeepers who are not restricted by the cost of articles of food. The English words, "warmed-overs" and "scraps," are not so imposing and euphonious as the French *réchauffé* and *beaux restes;* but none the less ought strict attention to be paid to the care and the use of the remnants from a previous meal. These should be well looked over, and a decision made as to what can be utilized for breakfast, lunch, or dinner. If the cook does not appreciate it, she should be taught that nothing is too small to save; and when she sees that these are utilized in the dining-room, and are not all left for her, she will have progressed far upon the road to economy. If she sees that a dainty macedoine, or a delicate Russian or Italian salad, may be made from the cold, cooked vegetables of the previous day, she will learn that what an ordinary cook wastes may appear next day in the form of a dainty and economical entrée.

In arranging a menu, care must be taken that a flavor is not repeated. If, for instance, tomato sauce is used, it is a mistake to have tomatoes again in any form. On formal occasions, even such little matters as the color of the dishes is not to be disregarded. If the fish is

white, and there are two entrées, one white and the other dark, it is well to serve the dark entrée first.

The great aim in menu-making is to have every dish, however simple, as perfect as possible, rather than to strive after novelty and the unintelligent use of extravagant material.

Another point which must influence a housekeeper in the selection of food and in the arrangement of menus is the knowledge of the proper food according to the occupation, age, and state of health of the several members of the family; also what food is best suited to the climate, or to the season of the year. For young and growing persons there must be an abundance of nourishing food arranged at proper intervals. Everything of an exciting or stimulating nature must be rigidly excluded. For them there should be milk, cereals, and fruit, vegetables, a small portion of well-cooked meat, few eggs; plain cake, little ice cream—not too cold, and simple puddings, and cookies, or wafers.

The diet for aged persons is like that for young and growing persons, except in quantity. One of the greatest sources of comfort in old age is a simple diet.

The occupation must be considered in preparing a diet. For those who are called upon to perform much work which tasks the muscular

strength, much muscle-making food is needed. This is not meat alone, as many suppose, but includes peas, beans, and cheese. If the labor is performed in the open air, the food need not be so easily digestible as is required for those who lead sedentary lives. The outdoor life aids digestion.

Those who are confined indoors need food which gives much nourishment in small compass, and that is to be prepared in its most digestible form. Where there is much brain exercise, fat is to be avoided, and the diet is to be composed of starchy and heat-producing foods.

Above all, a diet must not be overbalanced. A well-prepared menu will not show too much of one sort of food. These several sorts of foods and their chemical composition have been considered in the chapters on "Foods and Their Values." Apart from any scientific study of the question, and any regard for the chemical side, one's appetite is the best guide for this aspect. If too many species of one chemical sort of food are provided, they will not all be eaten. Nature is, after all, a very reliable guide in these matters.

There is no doubt that the arrangement of menus is a very great tax upon the intelligence and integrity of the thoughtful housekeeper.

It is just there that the written record of what is provided from day to day comes in. There is less danger of repeating if this be done. Rather than trust to the memory for what can be provided, the table upon "What to Eat" will be found most helpful. Frequent and regular consultation of this will help one in many a dilemma.

WHAT SHALL WE HAVE FOR BREAKFAST?

FRUITS

Apples	Grapes—Concord	Melons—
Bananas	" Delaware	" Cantaloupe
Blackberries	" Malaga	" Water
Cherries	" Muscatel	Oranges
Currants	" Tokay	Peaches
Figs	" Hothouse	Pineapples
Gooseberries	Grape Fruit	Strawberries
Grapes—Brighton	Huckleberries	Raspberries
	Lemons	Pears

CEREALS

Oatmeal	Grape Nuts	Force
Hominy	Rice	Cream of Wheat
Cracked Wheat	Indian Meal Mush	Uneeda Biscuit
Milk Porridge	Farina	Wheatlet
Brewis	Quaker Oats	Meal and Flour Porridge
	Pettyjohns	

BREADS

Parker House Rolls	Whole Wheat Muffins	Corn Bread
Raised Apple Biscuits	Graham Gems	Johnny Cakes
Sally Lunn	Waffles	Toast
Egg Biscuits	Buckwheat Cakes	German Toast
Hot Cross Buns	Griddle Cakes	Milk Toast
English Muffins	Flannel Cakes	Cream Toast
Milk Biscuits	Corn Cakes	Fried Mush
		Corn Pone, Southern Style

EGGS

Boiled
Poached
Fried
Scrambled
Poached in Milk
Shirred
Devilled
Fried with Brown Sauce
Minced with Tongue
Minced with Ham
Curry of Eggs
Omelet Plain
" English
" with Tomato Sauce
" " Bread
Baked
Omelet with Oysters
" with Ham
" " Cheese
" " Jelly
Baked Eggs
Soufflé
Eggs and Tomatoes
Egg Croquettes
Scalloped Eggs

FISH

Shad, Planked
" Broiled
" Fried
" Croquettes
" Roe
Fried Smelts with Roman Sauce
Trout (Fried)
Perch
Fish Cutlets
Lobster and Crab Cutlets
Salmon Steaks
Haddock, Broiled
Halibut Steak
Frogs' Legs
Pickerel with Cream Sauce
Soft Shell Crabs
Codfish
Spanish Mackerel
Eels
Finnan-Haddie
Smoked Salmon

MEATS

Bacon and Apples
Sausages
Pork Chops
Tripe
Hamburg Steak
Steak with Onions
Chili con Carne, Mexican
Stewed Liver, Beef Kidneys
Sweetbreads
Liver and Bacon
Fried Chicken
Turkey Croquettes
Stewed Calf Brains
Veal Cutlets

GAME

Rabbit
Venison
Quail and Woodcock
Small Birds

WHAT SHALL WE HAVE FOR LUNCHEON?

LUNCHEON DISHES

Oysters and Clams
" on Half-Shell
" Cocktail
" Fricasseed
" Creamed
" Fried
" Scalloped
" Stew
" Steamed
" Pigs in Blankets
Lobster à la Newburg
" Cutlets
" Scalloped
Crabs, Devilled
Crabs en Coquille, Cuban
Shrimps
Sardines
Anchovy Toast
Caviare
Salmon
Baked Smelts with Oyster Force-meat
Creamed Shad
Halibut and Cheese
Curried Veal
Banana Toast

LUNCHEON DISHES

Egg Timbales
Larded Sweetbreads, Fried or Roasted
Sweetbreads en Nid
Curried Chicken
Hotchpotch, Italian
Beef Loaf
Pressed Veal
Jellied Tongue
Rump Steak and Tomatoes
Roulades of Beef
Mock Pâté de Foie Gras
Cottage Pie
Irish Stew
Bramson Toast
Chipped Smoked Beef
Galantine
Porterhouse Steak with Oysters
Croquettes—
  Oyster
  Lobster
Croquettes—
  Chicken
  Chicken and Macaroni
  Rice
  Potato
  Celery
  Sweetbread
Chicken Casserole
Rice and Snow Casserole
Creamed Chicken
Philadelphia Scrapple
Cheese Dishes
Fondu of Cheese
Rice and Cheese Pudding
Cheese Puffs
Cheese Soufflé
Golden Buck
Walsh Rarebit
Macaroni and Cheese
Cheese Rings
Cheese Cutlets

VEGETABLES

Hashed Brown Potatoes
Potato Chips
Potatoes on Half-Shell
Sweet Potatoes *au gratin*
Pea Pancakes
Buttered Rice
Tomato Farcies
Boston Baked Beans
Baked Mushrooms

SANDWICHES

Brunette Sandwiches
Walnut Sandwiches
Egg "
Peanut "
Watercress "
Cottage Cheese "
Salad "
Nasturtium Sandwiches
Raisin "
Date and Nut "
Lettuce "
Anchovy "
Club "

SALADS

Chicken
Lobster
Crab
Shrimp
Sardines
Lettuce and Tomato Potato
Cauliflower
Beet
Fruit
Dandelion
Cucumber
Pear
Asparagus and Shrimps
Endive
Strawberry
Banana
Lenten
Sweetbread and Celery
Cherry
Peach
Green

CAKES

Huckleberry Chocolate
Strawberry Chocolate
German Coffee Cake
Springleys, German
Apple Cake
Fruit Cake
Pound Cake
Gold Cake
Sponge Cake
Kleiner, Danish
Almond Cake
Daisy Cake
Nut Cake
Bride's Cake
Caramel Cake
Marble Cake
Gingerbread
Almond Macaroon
Currant Cookies
Cocoanut Cream Puffs
Gingersnaps
Doughnuts
Peppernuts, German

WHAT SHALL WE HAVE FOR DINNER?

SOUPS

Mock Turtle
Oxtail Soup
Glasgow Broth
Mulligatawny
Chicken Cream
Beef Bouillon
Gumbo, Creole
Julienne
Oyster Bisque
Lobster "
Clam "
Cheese "
Tomato "
Cream of Spinach
Cream of Celery
Cream of Tomato
Cream of Onion
Cream of Pea
Bean Soup
Onion Soup
Split-Pea Soup
Clam Chowder
Noodle Soup
Lentil Soup

FISH

Red Snapper
Baked Bluefish
Black Bass
Sea Bass
Muskalonge
Shad
Halibut
Fresh Mackerel
Soft-Shell Crabs
Terrapin
Pompano
Whitefish
Weakfish
Flounders
Haddock
Perch
Pickerel
Porgies
Salmon
Turbot
Sole
Whitebait
Kingfish
Eels

PIÈCE DE RÉSISTANCE

Roast Beef
Braised Beef
Pot Roast of Beef
Beef à la Mode
Beef Tongue
Roast Leg of Veal
Saddle of Mutton
Beef Fillets Mignon
Ham Suprème, Boiled
Lamb Crown
Little Pig, Baked or Roasted
Roast Veal
Roast Lamb
Veal Pot Pie
Capon, Baked or Roasted
Chicken, Fricasseed
Duck, Olive Sauce
Goose with Sauerkraut
Turkey, Roasted
" Boiled
" with Truffles
Chicken with Ham
Chicken Espagnole

ENTRÉES

Beefsteak Ragoût
Beef Tongue Fillets, Baked
Bouchées Savory
Calf's Head à la Vinaigrette
Creamed Chicken
Chicken Croquettes
Chicken Livers
Chicken Timbales
Lamb Croquettes
Corned Beef, Creamed
Oyster Patties
Sweetbreads
Sweetbreads Croquettes
" Fillets
Tongue Salmi, Ragoût
Scallop of Ham
Welsh Rarebit
Codfish Cakes
Salmon Toast
Chicken or Game Creamed in Aspic
Veal Soup
Pâté de Foie Gras en Surprise

SHERBETS

Brandy and Sherry Sherbet
Cardinal Sherbet
Champagne Sherbet
Claret Sherbet
Coffee Sherbet
Crème de Menthe
Crème Yvette
Fruit Sherbet
Ginger Sherbet
Grape Sherbet
Lalla Rookh Sherbet
Maraschino Cherry Sherbet
Mint Sherbet
Orange Sherbet
Peach Sherbet
Roman Sherbet
Rose-Leaf Sherbet
Siberian Sherbet

VEGETABLES

Artichokes
Asparagus
Brussels Sprouts
Beets (Sour Sauce)
Cabbage *au gratin*
Carrots
Cauliflower
Chestnut Boulettes
Chestnut Purée
Cucumber Farci
Egg Plant Farci
Green Corn, Creamed
Green Corn Fritters
Peas in Crustades
Hominy Crescents
Tomatoes
Turnips
Squash
String Beans
Cabbage
Rice
Mushrooms
Creamed Celery
Peppers
Kohlrabi

GAME

Ducks, Broiled or Roasted
" Canvas-backs
" Redheads
" Ruddy
" Broad-bill
" Teal
Grouse, Roasted
Partridge, Roasted
Prairie Chicken, Roasted
Pheasants, Roasted
Hare, Roasted
Rabbit, Sauté
Partridge, Baked
Pigeons with Mushrooms
Plover
Snipe
Squabs
Woodcock
Quails
Reed Birds
Squirrels
Venison Chops
" Steak
Duck or Grouse Salmi

HOT DESSERT

Apple Balls
Baked Bananas
Cocoanut Timbales
Fig Compote
Macaroni Soufflé
Omelet Soufflé
Plum Pudding
Short Cakes
Rum Custard

PUDDING SAUCES

Claret Sauce
Caramel Sauce
Hard Sauce
Maple Sauce
Whipped Cream Sauce

HOT SAUCES

Banana Sauce
Chocolate Sauce
Fruit Sauce
Orange Sauce
Sherry Sauce
Soft Sauce

COLD DESSERT

Bavarian Cream
Charlotte Russe
Cabinet Pudding
Caramel Custard
Chestnut Cream
Date Soufflé
Fruit Macedoine
Strawberries en Surprise

ICE CREAMS

French
Philadelphia Ice Cream
Mousse
Biscuit Glacé
Biscuit Tortoni
Caramel Ice Cream
Burnt Almond Chocolate
Macaroon
Pistachio
Nougat
Vanilla
Violet
Café Frappé
Fruit Frappé
Water Ice

PASTRY

Plain Paste
Puff Paste
Bouchées
Pâtés
Tartlets
Vol au Vents

PIES

Cream
Crab Apple
Chocolate
Custard
Cocoanut
Marlboro
Mince
Pumpkin
Raisin
Rhubarb
Huckleberry
Almond Tartlets
Macaroon
Currant
Cherry
Peach
Pineapple
Apricot

A FEW DRINKS

Whiskey Sour
Manhattan Cocktail
Martini Cocktail
Vermouth Cocktail
Hot Apple Toddy
Sherry Cobbler
Silver Fizz
Plain Gin Fizz
Claret Cup
Eggnogg
Sherry Flip
Mint Julep
Pousse Café
Tom and Jerry
Whiskey Collins
Horse's Neck
Claret Punch
Champagne Punch
Punch
Gin Rickey
Mamie Taylor
Whiskey Sling
Hot Gin Sling
Brandy and Soda
Rock and Rye

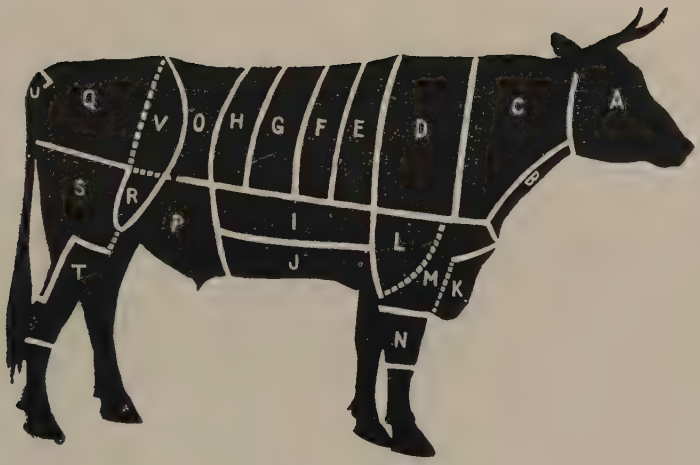
MARKETING

This is usually one of the terrors of the young housekeeper. There is no department of domestic science to which attention may be more profitably devoted than to the proper selection of food. Economy, health, and comfort all depend upon the efficient discharge of this duty. A feeling of utter helplessness comes over an inexperienced person when she faces the ordeal of a shop full of meats from which she has nerved herself to make a selection. She knows that those who are serving her are only too well aware of her incompetency and feels that they are ready to play upon it to the utmost. Every rule, and test, and guide to the selection of good meat leaves her, and she relies upon the recommendations of the salesman after a show of critical examination and of careful selection. Her mortification, disappointment, and humiliation, when the verdict of the family is rendered at the table, are too sacred to bear any comment. Right here is where the novice needs all the resolution, perseverance, and intelligent action that she can summon. If she is a good customer of the butcher, she may so impress him with the assurance that bad service means the loss of her trade that she may tide over the learning period until she is strong enough to

be her own marketer. She may see what a piece of meat looks like before cooking, and then note how it turns out. It will take several such lessons to know even what part of the animal the cut came from. We have seen some sirloins sent out to young housekeepers that never grew within two feet of that location, or else the animal was a fearful monstrosity. It will be found that it is one thing to know what are the best parts of meat to order, but it is another thing to know whether one has received the part one ordered.

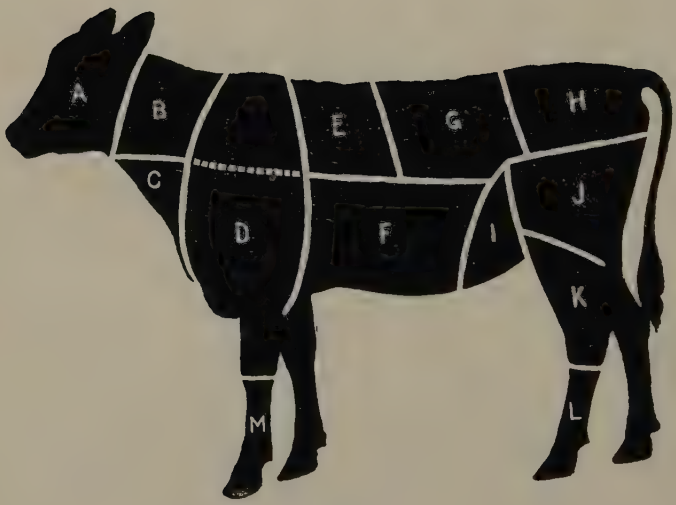
The simplest point to begin with is the odor of meat. There is a peculiar, characteristic odor to all meat. This is easily learned. If the meat has the slightest odor of taint, or any disagreeable smell, do not hesitate a moment about sending it back, or refusing to accept it. You are not only thoroughly justified in doing so, but it is your duty to do it. Do not be deterred from it by any assurances or indignation on the part of the butcher, or by any fear that you may make a mistake, or be thought inexperienced or too finicky. In such cases a slight error in judgment is to be preferred to ptomaine poisoning. The first step, and one that is very quickly learned, is to see that all meat, poultry, game, and fish are fresh and sweet in odor.

A second test of the freshness and quality of



OX—BEEF

A—Head
B—Sticking Piece
C—Neck
D—Chuck, Second and Third
E—Chuck, First
F—First Cut of Ribs
G—Middle Cut of Ribs
H—Back Cut of Ribs
I—Plate
J—Brisket
K—Butt End of Brisket
L—Bolar
M—Bony End Shoulder
N—Shin
O—Loin
P—Flank
Q—Rump
R—Veiny Piece
S—Round
T—Leg
U—Tail
V—Leg



VEAL

A—Head
B—Neck
C—Sticking Piece, End of Breast
D—Shoulder
E—Back
F—Breast
G—Loin, Best End
H—Loin, Bone End
I—Flank
J—Fillet and Cutlets
K—Knuckle
L, M—Feet

meat is that of its action under pressure. Press firmly upon the end of the meat with the thumb. If the dent made by the pressure rises up at once, the meat is all right. But if it does not rise, or is slow in rising, you may be sure that the animal was an old one, or that the meat is not of good quality.

The color of beef is also a good guide. If the meat is bright red, you may infer that it is fresh, and that it is probably ox-beef; cow-beef is not quite so red. If the meat is dark red, the animal was probably poorly fed, and too old for food. Good ox-beef has a yellowish fat, while that of cow-beef is whiter.

Some housekeepers who dislike fat meat select the lean. But this is often a mistake. Fat animals are well nourished, and the meat is more likely to be tender than is that of lean animals which are poorly fed, or over worked or driven. Lean parts of fat animals are the wiser selection. The best cuts are in the end the cheapest, for there is always a greater proportion of bone, gristle, and poor meat in the inferior cuts. These, of course, are useful in the making of soups, stews, etc., but they are expensive in boiling and roasting pieces.

The names of the pieces of beef, as most commonly applied in America, are as shown in illustration.

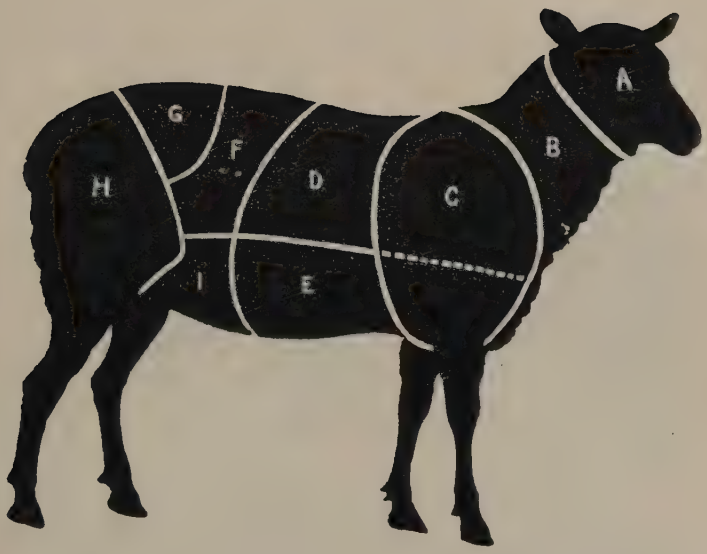
The best mutton is that of animals from three to five years old. Young mutton is tender, older mutton is richer and more juicy, and a great deal depends upon the breeding and feeding.

Good mutton is of a dark red color, the meat is firm and juicy, the fat is clear, hard, and whitish. Do not hesitate to reject all mutton in which the fat is yellow. If the meat is flabby, and if the fat around the kidney is small and stringy, the meat is not good.

There is less fat in the leg, and slightly more in the shoulder. There is also less bone in the leg; so it may be regarded as the best part of the sheep. As there is much bone and fat in the neck, it is the least desirable part.

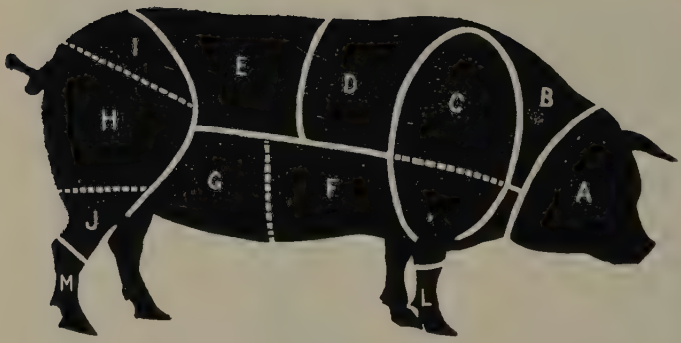
In selecting mutton, look for the large vein in the neck. If this is of a blue color, the sheep is fresh; but refuse it if the vein is green. In selecting a hind-quarter, the kidneys will have a slight odor if the meat is not fresh. Compare the fat upon the back with that upon the kidneys; if they are both white and hard and of the same color, the meat is all right.

Lamb.—The term is applied to the young of sheep until it is twelve months old. It is then called a yearling, though still sold as lamb. Spring lamb is a luxury only because it is out of season. The flesh is insipid, and does not in



LAMB OR MUTTON

A—Head
B—Neck
C—Shoulder
D—Back
E—Breast
F—Loin, Best End
G—Loin, Bone End
H—Leg
I—Flank



PORK

A—Head
B—Neck
C—Shoulder
D—Loin, Rib End
E—Loin, Best End
F—Breast
G—Flank
H—Ham
I—Ham, Butt End
J—Ham, Hock End
L, M—Feet

any way compare with the lamb in season, which is usually in the summer months. Very young lamb is sold only by the quarter; and the weight is then from 4 to 6 pounds to a quarter. Later in the season the weight is from 8 to 12 pounds to the quarter. It will go as high as 25 pounds to the quarter, but the carcass is then cut up the same as mutton. In cutting lamb the butcher splits the carcass lengthwise and then quarters it. Two or three ribs are left on the hind-quarter. In older animals, the leg is cut off and either cut into the leg for roasting and boiling, or into chops, as required. To distinguish a fore-quarter of lamb from a fore-quarter of mutton, it is only necessary to carry an idea of the difference of size, and to note that the bones of lamb are more reddish than are those of mutton. The breast and the adjacent ribs are considered the most delicious parts of the fore-quarter, and are usually roasted. It is advisable to remove the blade-bone to facilitate carving.

The loin is either cracked for roasting, or divided into chops. The neck and breast are sometimes separated from the shoulder and roasted.

Lamb does not keep long after killing. Look at the large vein in the fore-quarter or neck; if it is bluish the meat is in good condition; but

it is to be rejected if the vein is of a green color, for that is an indication of unfitness. In selecting a hind-quarter it is safe to reject it if the fat over the kidney gives out a slightly disagreeable odor.

Pork.—The leg and the shoulder of pork are most esteemed. The loin is the best roast. Good pork is marked by a pale red color in the lean, and a thin and delicate rind. There must be no green tint or disagreeable odor.

Fish.—Fish occupy a place midway between meat and vegetables. The red-blooded fish, such as the salmon, are only slightly inferior to meat in point of nourishment. Firmness and good odor are the great tests for fish. Fish are unwholesome just after spawning; when boiled, the meat should be white. If there is a bluish tinge, or transparency after boiling, the fish are either not fresh or are out of season.

LESSON X

BUILDING FIRES

One must be familiar with a range before one can control it. The dampers and drafts must be known, not only as to location, but their several effects upon the fire must be thoroughly understood. The time to learn all of this is when the range is cold and clean. There is always a draft, or door below the fire to allow a plentiful supply of air to rush in and to feed the fire from below. There is also a controlling damper which shuts off the heat from passing up the chimneys, and throws the heat around the oven. A third opening, or series of them, is placed above the fire-box and allows the air to pass over the fire, which has the effect of checking it.

1. A draft below the fire-box.
2. A damper in the pipe.
3. A check-draft above the fire.

When the fire is started, or when one desires a low fire to burn up quickly, the draft below the fire-box must be wide open; the damper in the pipe must be in such position that free draft

up the chimneys is allowed; and the check-draft over the fire must be closed. These several forms of drafts or dampers are present in every range, and there may be some slight modification of them, but the principle is always the same. After the fire has well started, and it is desired to heat the oven, the damper controlling the pipe or chimney must be closed. That will throw the heat around the oven. If the fire is burning too violently the lower draft is closed, the check-draft above is opened, and the chimney damper may be also closed.

In laying a fire, see that the stove is cleaned of ashes and clinkers. Open the lower draft and the chimney damper; and close the upper check-draft. Place some crumpled pieces of paper in the grate-box first. Do not lay in sheets of paper tightly pressed together. Use plenty of paper if the wood is large, or damp. Let a piece or two of the paper pass down through the bars of the grate so that it may be easily ignited from below. It is also well to place a large piece of wood at the back of the fire-box, and to place the finest pieces of kindling first on the paper in the front. If hard coal is to be used use plenty of wood, and wait until the large pieces are burning well. Then place a thin layer of coal on top of this. After this has ignited and is burning well, add more

coal. Do not fill the fire-box more than three-quarters full. A heavily loaded fire-box will throw the heat to the top of the fire-box; will warp the top-covers and bars; and will prevent a free draft over the top of the oven. Nothing is gained by this excessive and wasteful use of coal. After the fire burns well, close the lower draft and the chimney damper, and let the oven heat. Do not use kerosene or other explosive. If soft coal is used, it will ignite more quickly and easily than will hard coal. But it will also create more soot and dirt, which necessitates more frequent cleaning of the stove.

The essential qualities of a good range are:

1. Simplicity of construction. This renders control of the fire easy, and affords fewer chances for getting out of order.

2. Plain finish. This enables one to keep it looking well, with little trouble.

3. Perfection in the fitting of parts. This facilitates the control of the fire, and also of the heat, thus saving fuel and regulating the heat of the oven.

Do not be afraid to open the oven door and to look in to see how things are baking or roasting. Learn to do this quickly and quietly. Indeed, all of the movements about a stove must be done in this way.

The best time to blacken a stove is after the

fire is laid, and just before lighting it. Moisten some stove-polish with cold water and apply to the stove with a "dauber." The blacking must be rubbed in thoroughly, especially over the "red spots." Then start the fire, and while it is burning up, polish the stove with the dry brush.

LESSON XI

SOUP STOCK

The making of stock, frequently looked upon by the young housekeeper as too intricate and troublesome to undertake, becomes as simple as many other matters of cooking when divested of the seeming mystery surrounding it, a mystery arising only from the lack of a few explicit directions combined with the same amount of care and forethought necessary for the success in other departments of culinary art.

Stock is simply the concentrated juices of meat, or fowl, extracted by the process of long and gentle simmering. It is used as a nutritive basis for soup, and while there are certain rules to be followed, ingenuity and good judgment, combined with the ingredients at hand, will make it easy to produce a variety as acceptable in the matter of soups as in the rest of the menu.

Into the stock kettle many a little left-over of meat or fowl, or the bone of a steak or chop, should find its way. To the carcass of a fowl may be added a couple of pounds of veal with a

good-sized knuckle of the same, for a white stock; brown stock may be made from a combination of meats and fowl.

In the making of soups from stock, cooked vegetables, a little meat or vegetable hash, or even a bit of cereal left from the morning meal will add substance to the thick soup; and all of these will contribute to the delicious flavor, in which no single one predominates, that makes the good soup so vastly different from its opposite—the one indifferently seasoned or too weak.

Stock may be made the same day it is used, but rather than attempt this it is better to make one of the emergency soups, for which directions are given elsewhere. A number of these may be made without stock.

For cooking stock, a steam-tight kettle is all-important, as it is necessary that there should be no waste by evaporation. If a soup digester is considered too expensive, a granite-ware or porcelain-lined kettle with a tight-fitting cover will answer every purpose. Do not use an iron kettle if it can be avoided; besides being heavy to handle it rusts easily, and is more difficult to clean.

Vegetables should not be added to stock if it is to be kept for long, as their juices cause it to ferment sooner. In summer, it will be neces-

sary to bring to a boil and skim the stock every day or two to prevent its souring.

To prepare meats for stock, trim off all dried edges or useless bits, those that show any possibility of taint, or that have come in contact with rusty meat hooks. Rinse off the outside very quickly in cold water and wipe with a clean cloth. Do not wash the meat after cutting it up; the inside is clean, and each washing will result in some loss of the juices. Cut the meat in small pieces: crack or saw the bones to allow quicker and more thorough extraction of the juices of the meat and the gelatine of the bones. The marrow should be removed from the inside of the bones and placed in the kettle first; then pack in the meat and bones and cover with cold water in the proportion of one quart of water to one pound of meat.

When cooked meats are to be used, carefully trim from the steak or roast any parts of fat or bone that have been burned in broiling or roasting, as these will give a bitter flavor to the stock.

After adding the water to the meat and bones, let it stand for half an hour or more to allow the juices to be drawn out before heating; then put the kettle over a slow fire and bring the contents to a gentle simmer. Never let a soup boil rapidly, as the rapid boiling hardens the

outside of the meat and prevents the escape of the juices, while gentle simmering extracts the nutritive qualities.

Do not skim the stock as the scum begins to rise. This scum is simply the blood and juices which at this stage of the cooking coagulate and rise to the surface; a little later it will disintegrate and be absorbed in the liquor; to skim and throw it away is to lose a portion of the very thing we are trying to procure—the nutritive elements of the meat.

After simmering is well begun, add the seasoning in the proportion of 1 teaspoonful salt to a quart of water, a half saltspoonful of ground white pepper, a celery root, or a tiny bit of celery seed, or the tops of celery—the leaves of celery, by the way, need never be thrown out, for if not needed at once they may be dried like any other savory herb, and put away for future use. Boiled in the stock, before straining, they serve the same purpose as the seed. Add a sprig of parsley, and if cloves or allspice are used, the whole ones are better, as they strain out, and the flavor is better than in the ground spices, however pure they are supposed to be.

In the city markets " soup bunches " may be had for a penny or two, consisting of a sprig of parsley, a small carrot, a young onion, and whatever savory herbs are in the market, but

the housekeeper is fortunate if she can have her own parsley bed in her back yard, or a box of it growing on her back porch, as it is one of the most useful of seasonings and garnishings. A mixture of dried sweet herbs put up in bottles, to be found at first-class grocers', is a convenience, as it saves the trouble of measuring out each one separately. A teaspoonful of this to 1 quart of stock is the right proportion.

When the meat has cooked until reduced to shreds, or drops from the bones, leaving them clean, strain the stock into the stock-jar of earthen or stone ware. A rather fine strainer that fits the jar, or a colander into which a piece of cheesecloth is laid, should be used. Dip the stock from the kettle into the strainer, allowing it to run through without pressing or squeezing. By letting it stand a short time all the liquor will run through, leaving the scraps quite dry. These are of no further use.

Stand the jar where the stock will cool quickly, and when cool put in the refrigerator; the fat will rise to the top and form a cake hard enough to remove without trouble by running a knife around the edge of the jar. If a good proportion of bone has been used, the stock, when cold, will be a stiff jelly. The cake of fat on the top will help the stock to keep, by excluding the air, and need not be removed at once,

as a portion of it may be cut and the necessary amount of stock taken out; the remaining stock should be heated to allow the cake to form on the top again. When the fat is taken off it should be clarified with raw potato and added to the beef drippings for frying and sautéing.

The stock thus made will be sufficiently clear for most soups, but it must be clarified if a very clear one is to be made.

To clarify stock remove every particle of fat, beat the white of 1 egg for every quart of stock, add this and the crushed shell of the egg to the stock while the latter is cold, mixing it in very thoroughly. Put it over the fire and stir constantly while heating, so that the egg will not settle. When it has reached the boiling point, leave it to simmer for ten minutes; a thick scum will then have formed. Take the stock from the fire and add half a cup of cold water, let it stand a few minutes and strain through a colander in which a fine napkin or other thin cloth wrung out of cold water has been laid.

Do not pour the stock directly on the napkin or the scum will clog it, but let it first run through a fine wire strainer which will catch the scum and the shells. Either before or after clarifying, this stock is ready for an almost endless variety of soups or consommés by the addition of cooked vegetables, macaroni, spaghetti

or vermicelli, rice or barley; or it may be used in gravies and side dishes.

If dark soup is desired, it may be made by the addition of a little caramel or dark roux, or by browning some sliced vegetables or diced fresh meat in butter, and adding it to the stock.

To make a white stock, use veal and chicken in about equal parts; follow the directions for beef in preparing the veal, cut up and joint the chicken as for stewing, and proceed as for the other stock, omitting in the seasoning, cloves, or any spices that will darken the stock, and using celery seed or celery salt and white pepper. A fowl that is too old for serving in other ways may be used for chicken soup; the long, slow simmering will sometimes be the only method of cooking a fowl that proves to be very tough.

VEGETABLE SOUP

1 quart stock; 1 cup tomatoes; 1 cup chopped potatoes; ½ cup chopped onion; ½ cup chopped celery; ½ cup chopped carrot; 1 quart boiling water; ½ cup cooked corn; ½ cup peas; ½ cup chopped turnip; 1 teaspoonful salt; ½ saltspoonful pepper; 1 teaspoonful sugar; 1 bay leaf.

Some of these vegetables may be omitted, and rice, barley, or vermicelli added. Cabbage and parsnips may be added, but as these are fre-

quently objectionable it is well to use them only when the tastes of the diners are well known, or in such small quantities, finely chopped, that the flavor will be very slight.

Cook the chopped turnip, onion, carrot, and celery for ten or fifteen minutes, drain off the water, and add these and the other vegetables to the stock and boiling water, simmer until tender, but not broken; add the seasoning, and serve.

JULIENNE SOUP

1 quart stock; 1 pint vegetables same as in vegetable soup; ¼ saltspoonful white pepper; ¼ saltspoonful paprika; ½ teaspoonful salt.

Cut the turnip and carrot into quarter-inch dice, or slice thin and cut any fancy shapes. Cut the potato in small dice, and the celery in thin slices. Cover the vegetables with boiling water, add the salt and boil long enough to cook tender without losing shape. Bring the stock to a boil, add the vegetables with the water in which they were cooked, season, and serve as soon as hot.

TOMATO SOUP

1 quart stock; 2 cups stewed tomatoes (or 1 can cooked and strained); 1 teaspoonful sugar; 1 teaspoonful salt; 1 saltspoonful pepper.

Add the sugar, salt, and pepper to the strained tomatoes, then add the boiling stock.

Serve with inch-square croutons, well buttered and toasted in a hot oven.

TOMATO AND GREEN CORN SOUP

4 medium-sized tomatoes; 4 ears of green corn; 1 pint milk; 1 pint water; 1 small onion; 1 tablespoonful butter; 1 tablespoonful flour; 1 teaspoonful salt; 1 saltspoonful pepper.

Scald and peal the tomatoes, cut the corn from the cob, and mince the onion very fine. Cut the tomatoes in quarters and slice thin. Put in a saucepan with the boiling water and cook until tender, then add the milk and the flour and butter rubbed together; add the seasoning, simmer gently until the flour is cooked. A pint of strong beef stock may be substituted for the milk.

SAGO SOUP

1 pint chicken or other white stock; ¼ cup sago; 1 pint water; ¼ cup good cream; 1 teaspoonful salt; ½ saltspoon white pepper; 1 blade mace.

Wash the sago and soak it for two hours in as much cold water as it will absorb, then add the pint of boiling water and salt and mace and boil until it is clear. Take out the mace, add the stock and pepper, let it boil up and simmer gently for a few minutes; add the hot cream, and serve.

Or use clear brown stock instead of white, and omit the cream.

Use tapioca or rice instead of sago, soaking and cooking the tapioca until clear. If rice is used, wash thoroughly through several waters, and cook in boiling water ten minutes, then add the stock and cook slowly until the rice is tender. Add more seasoning if necessary.

EGG SOUP

1 pint milk; 2 eggs; 1 dessertspoonful flour; ½ teaspoonful vanilla extract; salt and sugar to taste.

Boil the milk and add the vanilla; mix the flour with a little cold milk, pour it into the boiling milk and cook until it thickens, then strain. Return it to the fire and add the slightly beaten yolks of the eggs, and the sugar, keeping it well stirred. Beat the whites of the eggs to a snow, and cook in a pan of water until set. Send the soup to the table with this snow floating on the top. Serve with very thin biscuits.

Being very easily digested as well as nourishing, this is a good nursery or sick-room soup.

BEEF SOUP (FRENCH METHOD)

3 pounds lean beef; 1 large shin bone; 1 can tomatoes; 4 quarts water; 2 teaspoonfuls salt;

1 large onion; 2 leeks; 1 dozen black peppercorns; ½ dozen cloves; 1 bay leaf.

Rinse the meat in cold water and wipe with a clean cloth. Cut it into small pieces; remove all the fat; have the bone well cracked; cover with cold water, and heat very slowly. When it is boiling add the tomatoes, leeks, the onion which has been fried, and the seasoning. Simmer slowly four hours, then strain; add 2 lumps of sugar burned in a spoon, or a spoonful of caramel. Let it boil up, then serve.

LESSON XII

GRAVIES AND SAUCES

These may be considered together because they are closely related. Gravies are really a kind of sauce. They are the cooked juice of meat, sometimes mixed with water and thickened with flour. They are either light or dark, according as the quantity of flour used is great or small. When gravy is to be thickened with flour, the simplest method is to first wet the flour with a little cold water and to rub it up with a spoon into a thin paste. More cold water is added until the liquid is thin enough to pour. Then it is stirred rapidly into the requisite amount of boiling water, so that all of the starch grains in the flour will burst at once and evenly. If boiling water be used to mix the flour with at first, the grains of starch will be unevenly affected. Some will burst, others will not; those that do not will form lumps.

When a dark gravy is required, the flour is stirred into the meat juice in the pan and is allowed to brown sufficiently over the fire. If there is much fat with the juice, the gravy will

brown very rapidly, because the fat, when boiling, is very much hotter than boiling water. The boiling point of fat is higher than that of water. For this reason the flour is cooked much more thoroughly than is the case when water is used.

Sauces are usually thought of as fruit preparations to be eaten with dessert; but the term is also properly applied to preparations of butter, eggs, and sugar, for puddings, and, indeed, to anything intended to give a relish to food. Meat juice, broth, fruit juice, cream, milk, water, may all be used in any combination in making a sauce.

Sauces are either white or brown, and, like gravies, may be of any consistency. They, too, are thickened with flour. In white sauces, the flour is cooked, but not browned.

THICKENINGS FOR SAUCES, GRAVIES, AND SOUPS

Much depends on the manner in which thickenings are made and blended with the dish in which they are used. They should always be perfectly smooth and of a rich, creamy consistency when added to the soup or sauce. If at all inclined to lumpiness, it is better to strain before attempting to combine them with the other ingredients; the time required to do this will be less than must be consumed in trying to

make them smooth by after-beating or cooking.

If flour is mixed with an equal quantity of butter there is no difficulty in rubbing it smooth, and by stirring into it a small portion of the cool broth, soup, or sauce, then adding it to the boiling liquid and stirring briskly, the desired smoothness will result. Flour and butter sufficient for a week's use may be prepared beforehand, if it be kept in the refrigerator or some other cool place.

If brown thickening is required, the desired shade of color may be obtained by browning the flour and butter and cooking together until dark enough, stirring all the time, and taking care that it does not burn; or roux or caramel may easily be kept on hand for this purpose.

When eggs are to be used for thickening, they must be beaten very light and added very gradually to the sauce, and stirred briskly while it cooks just enough to thicken, but it must not be allowed to boil, for it is very likely to curdle. The egg should always be added just before serving.

PUDDING SAUCES

FOAMY SAUCE

Whites of 2 eggs; 1 cupful sugar; 1 cupful milk, scalded; juice of 1 lemon.

Beat the whites of the eggs until foamy, but not stiff. Beat in the sugar, then the hot milk and lemon juice; serve hot.

BROWN SUGAR SAUCE

1 heaping tablespoonful butter; 2 tablespoonfuls flour; 1½ cupfuls boiling water; 1½ cupfuls brown sugar; ¼ teaspoonful nutmeg or cinnamon.

Melt the butter, add the flour, cook and stir until smooth. Pour in the water gradually, and boil, stirring constantly. Add the sugar, stir until it melts, sprinkle in the spice, and serve hot.

LEMON SAUCE

1 cupful sugar; 3 teaspoonfuls corn starch; 2 cupfuls boiling water; juice and grated rind of 1 lemon; 1 tablespoonful butter.

Mix the sugar and corn starch in a saucepan. Pour on the boiling water, stirring quickly, and boil and stir until the mixture is clear. When the sauce is to be served, stir in the rind, juice, and butter.

HARD SAUCE

¼ cupful butter; ¼ teaspoonful nutmeg; 1 tablespoonful lemon or fruit juice; ½ cupful pulverized sugar.

Cream the butter, work in the sugar gradually, and add the flavoring. Serve with a hot pudding.

LESSON XIII

BOILING

Boiling food is the process of cooking it in a boiling liquid, usually water. Boiling water has a temperature of 212°, and no matter how long it boils or how hard it boils, it never becomes hotter; for at that point it is transformed by the heat into steam, and in time boils away. Boiling is marked by rapid bubbling and the breaking of the bubbles into steam. When, however, the bubbles are very small and break with only a slight motion, the water is said to simmer and the temperature is only 180°. When the water does not simmer or boil, yet is so hot that one cannot bear one's finger in it, it is scalding hot water. We put a cover over a vessel of boiling water to keep the steam in and so increase the heat. When we do this we observe that the steam condenses into drops of water upon the cover of the vessel. As steam changes back to water by condensing it gives up some of its heat, and in this way the heat is increased. A covered vessel of boiling water contains more heat than an uncovered vessel.

Ordinary water contains certain gases and air dissolved in it. It is the oxygen in water which enables the fish to live beneath the surface. When, however, water is boiled, all of the air and gases are driven off. For this reason boiled water has a flat taste. Distilled water is insipid, and when used for drinking purposes is oxygenated, *i. e.*, has oxygen gas passed through it to revive it.

Water that has boiled and afterwards stood for some time should not be used for cooking or drinking purposes.

Careless housekeepers sometimes leave water in the kettle overnight and use it next morning after it has lost its freshness.

If a vessel of boiling water is left uncovered, the water will boil away more rapidly than it will if covered. If the vessel is too full the water will boil over, since the water expands by heating, and the bubbles of steam occupy more space than did the water.

Solid impurities—salts and vegetable matter—remain behind after the water has boiled away, and this, in time, leaves a crust upon the inner surface of the vessel.

The chief food elements affected by boiling are the starch and the albumen. Cold water has no effect upon starch. It will mingle with it, but if allowed to stand, the starch will soon set-

tle to the bottom of the vessel. If boiling water be poured upon finely ground starch those granules which the water first touches will swell and burst, allowing the contents of each granule to mix with the boiling water. But those granules which the water does not reach will be unchanged, and the mass will be lumpy. If, however, the starch be rubbed up with cold water to a consistency sufficient to permit the mass to run, and it be then poured into boiling water, the granules will all burst, and as the contents mix with the water, a smooth, uniform mixture results. This applies only to those starchy foods used in the form of a fine powder. Solid, compact, starchy foods should be put at once into boiling water.

Starch in a raw or uncooked state is not wholesome. When a starchy food is cooked the grains of starch swell and burst. For this reason a cooked potato which contains much starch is mealy and flaky. New potatoes do not become so on boiling, as they contain but very little starch. In potatoes which have been allowed to sprout, the starch is changed into gum and this renders them unfit for food.

Albumen is purest in the white of an egg, in which it occurs in a liquid form. It is also found in meats, especially in the juices and fibres of lean meat; this is called blood albumen.

If an egg is put into boiling water the white or transparent portion soon becomes opaque; it next becomes tough; and, finally, hard or brittle. The yolk, too, contains some albumen, which becomes mealy and dry in boiling.

When a piece of lean meat is placed in boiling water it will seem to shrivel and diminish in size. All of its juices will be retained, and the water will remain clear and uncolored. But if it be placed in cold water the latter will be discolored by the juices which have been soaked out. The water, as it becomes hotter, will assume a brown color. The cold water has extracted the juices from the meat, while the boiling water hardened the albumen and closed the pores of the meat, thus preventing the escape of the juices. If the meat is to be boiled it must be put at once into boiling water, so as to cause it to retain the juices. But if soup or broth is to be made by the extraction of the juices the meat should be placed in cold water, and the water should never pass the simmering point.

Water containing salt or sugar is denser than ordinary water, consequently it is more difficult to bring it to a "boil." Soft water extracts the juices of the meat more readily than does hard water. Hard water is best for boiling meat or vegetables. If only soft water is at hand it

should be salted in order to preserve vegetables whole while cooking.

When a piece of meat is boiled it is essential to retain its nutritious juices and not to allow them to escape into the water. To accomplish this, the meat is placed in boiling, salted water and allowed to boil as hard as possible for from five to ten minutes. This is enough to harden the albumen and to close the pores. The vessel, tightly covered in order to retain the steam, is placed where the water will gently simmer.

The scum which forms on the top of the water is albumen from the outside of the meat; it should be removed by skimming, as otherwise it will settle upon the meat and spoil its appetizing appearance.

Great care is necessary in turning the meat in boiling so as not to allow the escape of its juices. A fork should never be used for this purpose. When soup, broth, and teas are to be made it is essential to extract all of the juice and strength of the meat. To do this, place the meat, cut in small pieces, in cold water, and allow it to soak as long as possible. Do not let it boil, but only simmer until all of the nutriment is extracted.

When stews and fricassees are made, it is intended that both the meat and liquid shall be eaten. It is, therefore, necessary that the nour-

ishment be retained in both the solid and the liquid. To accomplish this a combination of both of the above principles is called for. Place the meat in cold water. Let it boil quickly, and after skimming place it where it can simmer. By placing in cold water some of the nutriment is extracted, and the rapid boiling stops the extraction before it has gone too far, while the simmering cooks the solid thoroughly.

As vegetables contain a little albumen and much juice, it is best to place them in hot water and bring them to a boil quickly. This will harden the albumen, keep in the juices, and cause them to be absorbed by the bursting starch granules.

LESSON RECIPES FOR BOILING

BOILED POTATOES

Take middle-sized potatoes, peel, wash, and drain them, put them into a two-quart stewpan with 1 quart of water and a little salt. When they have boiled fifteen minutes, drain off carefully every drop of water, cover closely, and let them steam till done, which will be in about five minutes more.

MASHED POTATOES

Mashed potatoes are ordinarily prepared by crushing the hot boiled potatoes with a rolling-

pin or the back of a spoon, the potatoes being placed in a bowl or dish, or on a pie-board. A little milk, butter, and salt may be added or not, according to taste, and the potatoes may either be at once served up, or pressed into forms, browned off in the oven, and then served.

SEASONING

A good basis for the proper amount of seasoning to give vegetables is 1 tablespoonful of butter; ½ teaspoonful of salt, and ½ saltspoonful of pepper to one pint of vegetables. A teaspoonful of sugar will improve the flavor of peas, beans, etc.

BOILED MUTTON

Place the meat in boiling water which has previously been salted. First, however, be careful to wipe the meat and also see that the fat is removed. The length of time for boiling is ten minutes. Then simmer for twelve minutes for each pound of meat after you have skimmed it. You may, if you prefer, boil a quart of rice with the meat. Parsley sauce or thickened gravy is the proper sauce to serve with it.

CAPER SAUCE FOR BOILED MUTTON

Take 2 ounces of butter; 1 ounce of flour; ½ pint of boiling water; ¼ teaspoonful of salt,

and ⅛ teaspoonful of pepper. Put the butter into a saucepan on a moderately hot stove; pour the water in very slowly, being sure to stir constantly; add the salt and pepper, and boil. Then add to it a tablespoonful of capers.

LESSON XIV

STEWING

Stewing is the process of cooking by gentle heat in a very small quantity of water. The essential difference between boiling and stewing lies in the fact that in the latter process the heat of the liquid never reaches the boiling point; but the process is one of gentle simmering. Therefore stewing is slower than boiling; but it is in many respects one of the best modes of preparing food. The long-continued moist, gentle heat has the effect of rendering tender and grateful the coarser kinds of meat that by any other treatment would be unpalatable. It is also an economical process of cooking—not only in the amount of fuel necessary, but in the quality and quantity of the food articles that may be prepared in this way. For there are such possibilities in the judicious and abundant use of seasonings and additional ingredients, that it is one of the best means of making over the savory remnants of previous meals. The one great principle of successful stewing is to remember that the food must not boil violently.

This causes meat to become tough and shrivelled, and renders it less nutritious and palatable. Some cooks fry the meat slightly before placing it in the water to stew. This is done for a double purpose: first, to retain as much as possible of the nutritious juices, and, second, to furnish a rich brown gravy which adds to the quality of the dish. These principles of cooking are equally applicable to the *stew,* the *ragoût,* the *haricot,* and the *salmi;* and it is the skilful efficiency in the practice that lends such excellence to the French cooking. The small quantity of water used ensures a rich gravy, or *cullis,* as the French call it. The loss of water in the necessary gentle simmering is only 15 per cent. Good judgment must therefore be used in placing sufficient water with the food. If too little is used, there is danger of the water evaporating and the meat and vegetables burning. If too much is used, the gravy or *cullis* will be thin and watery, or the dish will not be ready for the meal.

To attempt to remedy the fault of too much liquid by rapid boiling, in order to cause evaporation, merely violates all the principles of stewing and ruins the dish. As only a small quantity of water is used the meat and vegetables are cut into small pieces, the latter preferably into dice. The meat, however, is not cut

so small as in making soup. The reason for this is that it is desired to have some of the nutriment in the meat, while in soup it is to be entirely extracted and the meat is discarded. Another way to ensure in the same dish both rich broth and nutritious meat is to first place the bones, gristly portions, and a few small pieces of meat in cold water and let them come to a boil. This will give a rich broth or gravy. Then the lean parts of meat are added and the whole simmers until cooked. The water will absorb only so much of the juices of the meat. When it has absorbed all that it can the water is said to be saturated with the solution, and the process of absorption ceases. If raw meat is to be used, it is well to brown it on the outside before stewing in order to keep in the juices; but if pieces of cold roast beef or broiled steak are used, this will not be necessary, as the previous cooking will have effected that end. If the meat to be used is quite tough, it may be rendered tender by soaking it in vinegar before using; the toughness depends upon the proteids, which are insoluble in water, but are soluble in an acid. It is for this reason that the juice of lemon is used with meats. The cheapest portions of meat may well be used in stewing, as may also the meat of fowls, tough game, and large fish. The fat upon meat will make the stew richer.

When the vegetables are used they are not put in with the meat; for they do not take so long to cook. They are best added about half an hour before the stew is done. It is well to take out the bone and gristle before adding the vegetables; onions, however, if used, may be put in at the same time as the meat. If dumplings are to be added, they will require only ten or fifteen minutes to cook. They are best cooked by the steam from the stew. It is not at all necessary that they should be immersed in the liquid, but are dropped upon the meat and vegetables so that the steam may reach them. The vessel must be covered while the dumplings are in; and the stew is to be served at once when they are done, else they will become heavy. When we use vegetables and dumplings with the meat we call the dish a *stew*. If the meat and vegetables are cut very small, as small as a French bean, we call it a *haricot*.

If wine is used as a flavor, the dish is a *ragoût*.

If game instead of meat is used, it is a *salmi*.

If fish is used, it is a *chowder*.

In preparing meat for the stew be sure to take out all of the small particles of broken or splintered bone, and to wipe the meat. If fresh meat is to be ordered for the stew, the shin, neck, shoulder, or aitch bone may be chosen.

But it must not be forgotten that remains from previous meals may be used.

If fresh meat is used, brown it. First melt the fat in a frying-pan and, after seasoning the small pieces of meat and dredging them in flour, fry them in the fat until browned outside.

If onions are used, they too may be browned and put in with the meat. Enough water is added to cover the meat. The potatoes are pared and quartered, and parboiled for five minutes. They are added twenty minutes before the stew is done. Half an hour before the stew is done take out the bone and gristle and add the other vegetables. When ready to serve, take out the meat and vegetables with a skimmer and thicken the gravy if necessary. Add seasoning, and pour the gravy over the meat and vegetables.

A fricassee is a combination of stewing and frying. By the latter process the meat may or may not be browned. No vegetables are used in the fricassee. Chicken and veal are the meats usually used for this dish.

BEEF STEW

1 pound beef; 1 small turnip; 1 small carrot; 1 small onion; 4 medium-sized potatoes; 1 quart boiling water; 1 teaspoonful salt; sprinkle pepper; flour.

Buy tough, juicy beef from the leg, shin, lower part of the round, or the neck. Wipe, remove the fat, and cut the lean meat into inch cubes. Shake flour over it, and roll it so that it will be covered. Peel and slice the onion, brown it in the fat from the meat, and put into a saucepan with the boiling water, salt, and pepper. Brown the floured meat in the same fat, and add it to the boiling water. Simmer one hour to soften the meat and draw out some of the juice. Wash the turnip, carrot, and potatoes; take a thick paring from the turnip, a thin paring from the potatoes, and scrape the carrot thinly; cut the potatoes into quarters, the turnip and carrot into slices, then into quarter-inch dice. When the stew has been cooking fifteen minutes, or forty-five minutes before it is to be served, put the carrots and turnips on to boil in a separate saucepan in boiling salted water; one-half hour before it is to be served, put the potatoes in with the other vegetables. Before putting in the dumplings, drain the water off the vegetables and add them to the stew. Then boil the stew to cook the dumplings for ten minutes. Serve on a hot platter, with the dumplings around the edge, the potatoes inside, and the meat and vegetables in a mound in the centre. This method completes the stew in an hour.

Another way is to prepare the meat and

vegetables as above, put them all together in a saucepan and let the stew simmer slowly for two or three hours.

VEAL FRICASSEE

2 pounds shank or neck of veal; 2 small onions; 1 teaspoonful salt; ⅛ teaspoonful pepper; flour; dripping; ½ cup milk; 1 tablespoonful butter.

Remove the bones, if there are any; place them in a saucepan with the salt and pepper and add 2 cups cold water. Simmer, and while cooking, slice the onions, cut the meat into inch cubes, remove the fat and dredge the meat with flour. Melt 1 teaspoonful dripping in a pan, fry the onion golden brown and add it to the water. Brown the meat slightly and add. Simmer one-half hour. Cook 1 tablespoonful flour in 1 tablespoonful butter, add the milk gradually to it, and stir it into the fricassee. Boil five minutes, and serve. If desired, 2 potatoes, which have been parboiled five minutes, may be sliced and added to the fricassee after the meat.

CHICKEN FRICASSEE

Clean a chicken thoroughly. Remove the crop by pulling it out at the end of the neck. Take out the lungs, heart, gizzard, and liver. Clean the gizzard, cut off the green gall-bladder

from the liver, being careful not to break it, or the bitter juice will spoil the chicken. Cut off the legs and wings, and separate them at the joints. Cut the chicken into pieces about the size of the legs, and put all the pieces, with the heart, gizzard, and liver, into a kettle with 1 quart boiling water, 1 teaspoonful salt, and a sprinkle pepper. Simmer one-half hour to each pound, or until tender. Remove the chicken from the water, let the water boil, and mix 1 tablespoonful flour with enough cold water to make a smooth paste, stir it into the boiling water, and boil five minutes. Brown the chicken in a little butter in a frying-pan, pour the gravy over it, and serve on slices of toast, or with potatoes on the table.

LESSON XV

FRYING

Frying is the process of cooking by immersing the food in hot fat—not using merely enough to keep the food from sticking to the vessel, but sufficient to wholly cover the articles of food. This requires a fairly deep kettle and a quantity of fat. It is not necessarily an expensive process, as the fat may be saved and used over and over again.

The fat used is clarified fat from fowl, suet, beef fat, and lard. It is prepared by saving all such uncooked fat and making it pure and clear. To do this, the fat is cut in small pieces, covered with cold water, and cooked slowly until it is melted and the water nearly all evaporated. It is then strained, and the scraps are pressed in order to get all of the fat out of them. It is then set aside to cool, and the fat will form a solid cake on top and the water will remain below and can be poured off. To this cake of fresh fat may be added dripping from roast beef, chicken, veal, or pork. Do not use the fat from turkey, ham, or mutton, as it is too strong

and will impart a disagreeable taste to the food. As new fat is added, the whole mass should be melted, as by this means it is freshened. Frequent melting and straining will make it possible to keep fat sweet and good for weeks.

This mixture of several sorts of fat is an advantage in frying; for if suet alone is used, it will cool too quickly and also give a strong flavor to the food. The very best fat for frying is olive oil, but this, of course, has the great drawback of being too expensive for ordinary use. The fat must be absolutely free from water or moisture. Even the steam from a kettle must not be allowed to condense near the vessel, for the slightest moisture will cause the fat to boil over and take fire, with the possibility of dangerous results. Keep all water away from boiling fat. Even under the most favorable circumstances the process of frying requires very skilful manipulation to keep the fat from covering the stove, taking fire, or filling the house with offensive odors. The process is also difficult, inasmuch as the fat that falls upon the stove gives rise to a smoke that is very trying to the eyes, nose, and throat of the operator.

In frying, the fat does not boil, but is merely hot. When we reflect that boiling water has a temperature of 212°, and boiling fat is between

550° and 600°, we can readily understand that it is not necessary to boil the fat to produce heat enough to cook the food. The proper temperature is about 375°. It is plain that food can be cooked in this way much more quickly than by boiling the water. After the fat is put into the vessel and melted, the proper test for the requisite degree of heat is to place in it a slice of potato. If this browns in from forty to sixty seconds, the fat is ready for use. If too many pieces of meat or other food are placed in the fat at the same time, they will reduce the temperature of the fat and retard the process. The object is to keep the fat at as steady and uniform a temperature as possible. See that the pieces of food are dried before placing in the wire basket for immersion, as even the slightest moisture on the food will cause the fat to boil over and take fire. If, on immersion, the fat should threaten to boil over, merely raise the basket from the vessel and it will subside. As soon as the pieces are browned, raise the basket and let it drip over the vessel. Care must be taken to let the fat drip very thoroughly from the food; this may be facilitated by lightly shaking the wire basket. Then place the pieces upon a sheet of absorbent, unglazed, or unsized paper to absorb the fat, and keep hot until served.

It must not be supposed that any of the fat enters the meat while it is cooking. The fat should be hot enough to close the pores and to harden the outer albumen so that no fat can enter. That degree of heat is determined as indicated above.

When the cooking is done strain the fat into a vessel, and set aside for future use. There is room for economy in the way the fat is used. The fat will turn brown after it has been used several times. Brown fat should never be used in cooking potatoes, or doughnuts. When it is too brown for this purpose, use it for croquettes, and lastly for fish or fish-balls. If the pieces are crumbed before frying, see that all of the crumbs are strained out, else they will adhere to the vessel and burn. The chief foods to be fried are chicken, meat, oysters, croquettes, potatoes, fritters, doughnuts, fish, and fish-balls. If the pieces of meat are large, it is well to remember that it is possible for them to become brown before they are cooked through. In the case of large pieces of food, it is necessary to set the kettle back from the intense heat of the fire so that the food may cook more slowly and thoroughly. Cooked food such as croquettes, fish-balls, etc., and small fish, oysters, etc., do not take above one minute to brown. All food cooks more quickly in hot fat than in any other

way. When transferring the basket from the kettle to the table see that no fat drips upon the stove or the floor. This can best be prevented by holding a tin plate under the wire basket.

SAUTÉING

This is the ordinary method of frying in a shallow pan with just enough fat to keep the article of food from burning or sticking to the pan. The food is browned on one side and then turned. It is usually applied to omelets, fritters, cakes, and potatoes. In some households it is the only form of frying used; but it is the most objectionable and injurious form. The food becomes thoroughly saturated with grease, besides losing the juices upon which the flavor and nutriment depend, and indigestion inevitably follows. The only essentials to success in this process are a hot griddle and a quick fire. Fried chicken is really *sautéd.* The chicken is of course very tender. The pieces are wiped, dredged with flour, salt, and pepper, and are *sautéd* in hot salt pork fat until browned. The chicken must not be burned. Butter, so commonly used, is not a good medium for *sautéing,* as it decomposes and becomes chemically changed at a low temperature. Oil is the best medium of all, but is expensive. Lyonnaise and hashed brown potatoes are *sautéd,* not fried.

LESSON RECIPES FOR FRYING

FRIED POTATOES

Cut cold white or sweet potatoes into slices. Put 1 tablespoonful dripping and 1 tablespoonful butter into a frying-pan. When the fat is smoking, put in enough potatoes to cover the bottom of the pan; sprinkle on salt, and a very little pepper. When brown on one side, turn and brown the other side. Put on a hot dish while frying another panful. Many persons like a little onion juice sprinkled on the potatoes, or some finely chopped parsley sprinkled over the slices while they are being browned.

Use a level teaspoonful of butter and one of dripping for a small pan.

TOMATOES

6 tomatoes; 1 tablespoonful flour; ¼ teaspoonful salt; sprinkle pepper; butter.

Mix the flour, salt, and pepper, and put into a dredger. Cut the tomatoes in slices, without skimming; shake the flour-mixture over the slices on both sides. Put enough butter into a frying-pan (1 teaspoonful) to cover the bottom when melted, and, when it bubbles, lay in the slices of tomato, and cook until done. Make a sauce by using the liquid remaining in the pan. Add to it ½ cup of milk or water.

EGG PLANT

Remove the skin and cut into slices, not more than one-half inch thick. Soak in cold salted water one-half hour and drain. Beat an egg, prepare some fine bread crumbs. Wipe the slices, dip them in the beaten egg, then in the crumbs. Put 1 tablespoonful butter or dripping in a frying-pan, and brown the slices on both sides in the fat. The egg plant may be fried in a bath of fat, which is the better way to prevent its absorbing fat; fifteen minutes is necessary to cook it sufficiently.

TO FRY SCRAPPLE AND INDIAN MUSH

Cut cold scrapple or mush into slices one-half inch thick. Melt one-half tablespoonful dripping in a frying-pan, and be careful to let it get smoking hot. Put in a few slices, just enough to cover the bottom of the pan, and fry them until brown. Turn them, and brown the other side. Lay the slices a moment on clean, brown paper to drain, and serve hot on a hot plate.

Shake flour over the slices of mush before frying. Use no fat in frying scrapple.

FRIED SAUSAGES

Prick them all over with a darning needle, and pour boiling water over them in a saucepan.

Let them come to a boil over the fire, then take them out and wipe them dry. Have ready on the fire a frying-pan with enough hot fat in it to just cover the bottom. Put the sausages in before they grow cold. Turn and shake in the pan, while cooking, to brown them evenly and keep from bursting. When well browned they are done. They will require about ten minutes.

FRIED HAM

Cut ham into slices, one-quarter of an inch thick, if cooked; trim off the skin; sprinkle with a pinch of pepper; have the frying-pan hot; put in the slices of ham, and fry over a quick fire until the fatty part is nicely browned.

For ham and eggs proceed as above, and when the ham is done take it out and keep hot. Then drop the eggs into the hot fat in the frying-pan and cook until the eggs are firm. Take off the eggs and put one on each piece of the ham, which should be cut up.

LESSON XVI

BRAISING

This is a combination of baking and boiling. It is especially recommended as a successful method of cooking the inferior parts of meat; hence is economical.

A special covered pan is used for the purpose. The meat is placed in the pan with some water or stock. The closely covered pan is then put in a well-heated oven. Herbs, onions, carrots, bay leaf, and other seasoning are to be used to flavor insipid and tasteless meat. The process of cooking is slow, hence the meat will be tender when cooked. The juices which escape are taken up by the water or stock. The meat browns as the water evaporates. It is an effective way of cooking tough meat, such as fowl, or beef, and also veal. The English braising kettle provides for the placing of hot coals upon the lid so as to entirely surround the food with heat. But this form is not necessary. A common stew-kettle with tight-fitting cover answers admirably. A form of braising pan is known as a "roasting-pan," but as the process of roast-

ing requires that a current of air shall pass over the food, it will be plainly seen that the name is not appropriate to a tightly covered pan.

LESSON RECIPES FOR BRAISING

BRAISED BEEF—POT ROAST

3 pounds brisket; 1 pint boiling water; 2 even tablespoonfuls flour; 1½ teaspoonfuls salt; 1 gill cold water; ¼ teaspoonful pepper.

To Cook.—Wash the meat with a wet linen cloth; trim and season it with the salt and pepper. Put it into a very hot iron pot and set it on the stove where it will brown quickly. Turn it frequently. Cook the meat in this manner until thoroughly browned on all sides; add a gill of boiling water, and draw the pot to a part of the stove where the contents will cook slowly for four hours. Add a gill of boiling water whenever the liquid in the pot becomes low. When the meat has been cooking three hours, mix the flour smoothly with the gill of cold water; stir it into the pot; add enough boiling water to make the full pint. Cook the meat an hour longer, then serve on a dish with a part of the gravy poured over it; serve the remainder of the gravy in a gravy dish. It is very nice to substitute for the last water a quart

of tomatoes, peeled and chopped, or in winter, a can of nice tomatoes, chopped fine. In both cases, take out the cores of the tomatoes. Any inferior piece of beef will answer for this dish.

LESSON XVII

CASSEROLE

This is a form of baking. It seems to alarm the ordinary housekeeper on account of its formidable name. But it is really a simple process and one that abundantly repays the slight trouble.

A casserole is a covered dish of pottery designed to withstand the intense heat of the oven. This is the term as applied to the form of baking. There is also another form which is really a mould in which food is cooked and turned out and served upon a dish. The ordinary form of meat *en casserole* is as indicated, and the food is served in the dish.

The meat or chicken, which must be tender, is placed in the casserole, together with vegetables which have been slightly browned, and a small quantity of stock. This is placed in a hot oven and allowed to cook for three-quarters of an hour, tightly covered. Potato balls or *sauté* strips of potato and mushrooms are added, and the whole in the then uncovered dish is allowed

to cook for fifteen minutes. It is then ready to be served in the casserole.

LESSON RECIPES FOR CASSEROLE

CASSEROLE OF RICE AND MEAT

Boil 1 cupful of rice till tender (wash rice thoroughly). Chop very fine half a pound of any cold meat, season highly with salt and pepper (½ teaspoonful salt, ½ saltspoonful of pepper; 1 spoonful celery salt; 1 teaspoonful finely chopped onion; 1 teaspoonful of chopped parsley; 1 saltspoonful each thyme and marjoram). Add 1 beaten egg; 2 tablespoonfuls of fine cracker crumbs, and moisten with hot water, or stock enough to pack it easily. Butter a small mould, line the bottom and sides one-half an inch deep with rice, pack in the meat in the centre, cover closely with rice, and steam forty minutes. Loosen it around the edge of the mould; turn it out on a platter, and pour tomato sauce over it.

Tomato Sauce.—½ can tomatoes; 1 cupful water; 2 cloves; 2 allspice; 2 peppercorns; 1 teaspoonful of mixed herbs; 2 sprigs parsley; 1 tablespoonful of chopped onion; 1 tablespoonful butter; 1 heaping tablespoonful of corn starch; ½ teaspoonful salt; ½ saltspoonful pepper. Put the tomato, water, spices, herbs, and

parsley on to boil in dish, not tin or iron; fry the onion in the butter till yellow; add the corn starch, and stir all into the tomato. Simmer ten minutes; add salt and pepper and a little cayenne pepper, and strain the sauce over the meat.

LESSON XVIII

BROILING

Broiling is the process of cooking by placing the food over hot coals. The first essential is to see that the meat is frequently turned. This is to prevent it from burning, which it will do if left too long in contact with the intense heat. The second point to regard is the nature of the fire. The coals should be bright red and the stove well filled so as to bring the coals close to the meat. Care must be taken that the coals are red, for if flame is present the smoke and vapors impart a disagreeable flavor to the food. If a wood fire is being used, the wood should be hard wood, and should also be burned to a good bed of coals without flame. It is a great mistake to attempt to kindle up a poor fire with wood and to broil over the flame, not only because the fire is not hot enough, but the flame and smoke will give the meat an unpleasant flavor. As the fat melts and drips from the meat it will take fire and either burn or taint the meat. There are two ways of obviating this: Cut off most of the fat, not all, for a little will

baste the meat, and then see that the damper of the stove is open so as to carry the odor and smoke up the chimney.

Meat is best broiled upon the double wire broiler. Grease the wires with fat to prevent the meat from sticking to them. The process will demand one's entire attention. As the meat requires frequent and rapid turning, it will be necessary to handle the broiler a great deal and very quickly. Therefore the handle should be protected by a cloth, or towel. Well-broiled meat contains all of the juices. Badly broiled meat is leather, tough and dry. Clearly, then, the juices must be retained. To do this the meat is not salted, for salt draws out the juices. It is exposed for ten seconds to the hottest portion of the fire, turned quickly, and the other side treated in the same way. This has the effect of searing the meat, so as to close the pores on the two sides so that the juices cannot escape. If the meat is kept longer than ten seconds at first, the heat will drive the juices to the top, and when the meat is turned over they will escape. If the fire is not hot enough, or if the meat is too far away from the coals, the searing will not be sufficient to harden the outside and the juices will escape. After the juices have been driven to the middle of the meat, the subsequent heat causes them to evaporate in

steam, and their expansion gives the meat the larger puffy look that well-broiled meats always display. Consequently a good test for good broiling is to press the meat down with a knife point; if it springs back to place it is well broiled. Badly broiled meat is shrunken and tough. It is a mistake to cut it to see if it is done, for that lets the juices escape. Four minutes for one-inch steak and six for one and one-half inch, over a hot fire, turning the meat every ten seconds, will give good results. In broiling there is one apparent contradiction. One would think that a small, thin piece of meat would require a slow fire or a distance from the fire, and that a large, thick piece would require a hot fire and closeness to it. Just the reverse is the case. The smaller the article, the hotter the fire.

The platter should be placed to heat before the broiling is begun, else the meat must be left to attend to it, and that is impossible if one wishes good results.

In broiling chickens more time is required, probably twenty minutes. It is a good plan to place them for a few minutes in a very hot oven before broiling.

Buttered paper is a good thing to use to keep in the fat and juices and to keep out the smoke. Practice is necessary to handle this skilfully to

keep the paper from burning, but care will accomplish this. The paper is white letter paper of large size. It is oiled with soft butter well rubbed in. The meat, such as chicken, chops, small birds, or fish, is wrapped, the edges of the paper turned in two or three times, and the ends well folded. It takes longer to broil with the paper than without it. When the paper is well browned the meat is done.

Instead of using the double wire broiler, a hot frying-pan or spider may be used. This is called pan-broiling. The pan is heated very hot. A little fat is used to prevent the meat from sticking, but absolutely none is left on the pan. The meat is placed on the hot pan for ten seconds, then turned without a fork, and seared on the other side. It is broiled for four minutes, but turned only twice in that time, not so frequently as when broiled over the coals. This is not frying, because no fat is left in the pan.

LESSON RECIPES FOR BROILING

BROILED STEAK

A thick tender steak, a double broiler, and a hot, clear bed of coals. Place the steak in the broiler and cook on one side ten seconds and turn. Repeat this till the steak is done. If you

want it rare, three or four minutes will be sufficient. The number of times you turn must depend on whether you wish the steak rare or well done. Practice will soon determine this. Place the steak on a hot platter, cover with butter, season with salt and pepper, and serve hot. Or serve with maître d'hôtel butter. If a gas stove is used, the broiler in the oven will be found quite equal to, if not superior to, the bed of coals.

TIME-TABLE FOR BROILING

One-inch steak, four to six minutes. Thicker than inch steak, six to twelve minutes. Thin fish, small, five to eight minutes. Thick fish, twelve to sixteen minutes. Chickens, twenty minutes. Chops, eight to twelve minutes.

LESSON XIX

BAKING

This is the process of cooking in a close, heated oven. The essential difference between baking and roasting is that in the former process the air in the oven is unchanged throughout the entire time of cooking; while in roasting there must be a current of air passing through the oven, taking the place of that air which passes off by ventilation. This difference, though slight, is essential. Yet the so-called "roasted" meat is most frequently only baked.

There can be no comparison between the qualities of properly roasted meat and baked meat. In the latter process the outside of the meat is parched and hardened and the quality and flavor of the baked meat are much inferior to those of properly roasted meat.

The essential principle in well-baked meat or fish is to keep the juices within the article of food as far as possible. One step toward this is to put the meat in a pan with fat and without water, and place in the oven made as hot as possible. The first few minutes in the hot oven will

harden the outer surface and close the pores so that the juices will be retained. If water is placed in the pan the heat can never rise above 212°—the temperature of boiling water, whereas the temperature for baking meat should be nearer 300°. After the hardening of the outer surface has taken place, water may be added to keep the meat moist and supply liquid for frequent basting. The water will also serve to reduce the heat after the first step is taken.

The baking-pan should be raised above the surface of the bottom of the oven, because no heat is required there. If the dish is not provided with legs or supports to so raise it, a tin pie-plate or inverted pan may be used for this purpose. It also serves to keep the flour and fat from burning.

As the baking proceeds, the meat is to be well basted every ten or fifteen minutes. A box, the height of the bottom of the oven, from the floor, is very useful for sliding the pan out upon. While this is being done, the opening of the oven doors allows the smoky odors to escape. If allowed to remain in the oven, they taint the cooking food with the pronounced baking odor so objectionable to a refined palate.

After each basting the meat is to be dredged with flour, salt, and pepper. Salt has the effect

of drawing out the juices from meat, but as these mix with the flour, a hard paste is formed over the entire surface of the meat, which keeps them in. As the meat is placed in the pan with the skin side down and the juices do not escape through it, there is no loss, as there would be if the meat were reversed. As the process nears completion the meat is turned over, without the use of a fork, for the final browning.

LESSON RECIPES FOR BAKING

BAKED SALT MACKEREL

Soak mackerel overnight, boil in water enough to cover, five or ten minutes; pour off water, put mackerel in pan, pour over it 1 cupful of sweet cream or rich milk, add a few lumps of butter, a little pepper, put in oven, and bake till brown.

BAKED FISH

Have your fish dressed for baking, then make a stuffing of bread crumbs; 1 teaspoonful of sweet marjoram; 1½ teaspoonfuls salt; 1 slice of fat salt pork, chopped fine; pepper, and piece of butter size of large egg; 1 small onion. Mix this well together and stuff the fish. Either sew the fish together or sew a piece of cloth over the opening; place in the pan and lay slices of salt pork on the fish. Bake one hour.

LESSON XX

ROASTING

Roasting is the process of cooking food before a hot fire or in an oven well ventilated so that a current of air passes over and around the article which is being roasted. The term is properly applied to cooking before a fire upon a spit. But this method is possible only in large establishments; and the term is now generally applied to the cooking in a pan in a well-ventilated oven, such as is provided in all good ranges. If there is no ventilation and the pan is covered, the process is not roasting, but baking.

The fire must be very hot and of sufficient quantity to last throughout the process without replenishing. The pan in which the meat is placed must be provided with a rack so that the meat does not rest upon the bottom of the pan, but is supported a little above it. The meat should first be properly fastened with skewers. If it is a sirloin, and there is a piece of the flank attached, cut it off and keep it for soup. If, however, it is required for use, fasten it by

wrapping it around the roast. If the meat is very lean, put a little dripping in the pan. If the meat has fat upon it, this will not be necessary. The fire should be very hot when the meat is first put in the oven. The first step in the process is the melting of the fat upon the meat. Then the great heat closes the pores of the meat and hardens the outer albumen, which keeps in the juices of the meat, and causes it to roast well. The meat should be placed in the pan with the skin side down, as this exposes the lean parts of the meat to the action of the fire first. After the process has gone on long enough to close the pores of the meat, the fire is to be regulated and lessened so that the interior of the meat may be well enough cooked before the outside burns. When the outside has hardened, the interior of the meat is practically steamed in its own juices. If a slow fire is used, it will be found that the juices of the meat will be converted into steam and will evaporate, leaving the meat very dry. As the greater part of the meat is water, a poorly cooked piece of meat will shrink greatly in the cooking. This, then, may be taken as a sort of test of the kind of cooking the meat has had. The loss of juices is in a measure supplied by the process of basting. This consists of pouring back over the meat the fat and juices which

collect as dripping in the pan. This basting serves also to cover the meat with a coating of fat, which aids in keeping in the juices. The meat must, of course, be turned frequently, so as to expose all parts of it to the action of the fire. The meat is also to be dredged twice with pepper and salt. When the meat is nearly cooked, flour is to be added, to make with the fat and juices a brown gravy. Should there be any danger of this burning, the addition of a little water will prevent it.

Allow ten minutes to the pound if it is to be rare, and fifteen if well done. If the roast is thin such as ribs, it will require a less time than a compact rump roast, and a large rump roast will take a relatively longer time than will a small one.

In a rib-roast the ribs and backbone are removed, and the roast is tied or skewered into a compact round form. This will take a longer time to cook than if the bones were left in; but it cooks and carves much better.

LESSON RECIPES FOR ROASTING

ROAST BEEF

A steady, moderate fire is required, to start with, to roast beef properly. After the meat is thoroughly warmed the oven should be made hotter.

The first thing is to sear the surface of the roast in order to keep in all the juices. To do this, you must proceed as follows:

Place the roast with the skin-part on top into your pan and pour a couple of cups of slightly salted boiling water over it. Then close the oven and leave it closed for about twenty minutes. Then baste it all over by taking a long-handled spoon and wetting every part thoroughly with the salted water in the bottom of the pan. This should be repeated every fifteen minutes. Time for roasting is twelve minutes for each pound.

A few don'ts and rules will help the pupil to acquire the knack of doing a roast just properly.

When basting don't hold the oven door wide open. Open it only enough to allow yourself to reach in and easily " baste " it.

If one side of the roast browns more quickly than the other, turn the pan in the oven.

If the water dries up before it is sufficiently done, add another cupful of hot water from the kettle.

When more than half done sift a little flour over the roast, leaving it in the oven. Let this brown before renewing the basting operation, and then proceed as before.

About five minutes later rub a teaspoonful of

butter over the top of the meat. This will, if your oven is right, cause a brown froth to cover the roast.

When done place on a heated platter, and keep warm.

GRAVY

Scrape the sides and bottom of the meat-pan and gather the browned flour towards the centre. If there is not enough, sift a little more flour into it. Also add a little more hot water, if necessary. Then stir until you have a thick gravy. Add salt and pepper to suit the taste.

Mutton is roasted the same way as beef. Currant jelly generally takes the place of gravy. Lamb is roasted two minutes less to the pound than beef. Mint sauce is generally served in place of gravy. Roast veal must be cooked twice as long as lamb or beef.

LESSON XXI

STEAMING

This is a process of cookery which is particularly adapted to very delicate preparations. It is sometimes carried on upon a large scale, and then an apparatus for the special purpose is provided. In ordinary kitchens, and for every-day dishes, a kitchen steamer will be all that is required. The article of food which is to be steamed should be prepared *as for boiling*. It should then be placed in a steamer, which has a closely fitting lid, over a saucepan full of boiling water, and this water should be kept boiling, and should be replenished as it boils away. When any delicate preparation is to be steamed, the cook should on no account boil anything strong and highly flavored in the vessel under it. For instance, liquor containing vegetables must not be boiled under a pudding, or the flavor of the latter will be entirely spoilt. If a proper steamer should not be at hand, a substitute may be improvised for steaming puddings, etc., as follows: Turn a plate upside down in a saucepan, and surround it with about three

inches of fast-boiling water. Place the mould containing the pudding on the plate, cover the saucepan closely, and keep the water gently boiling round it. Lay a round of oiled paper on the top of the mould. This process is especially adapted for tough meats, fruit cakes, hams, etc. It involves more time than boiling. Many of the vegetables such as squash, corn, beans, peas, and cucumbers may be treated by this method. There is no danger of burning, if this method is used for cooking cereals or making custards.

LESSON RECIPES FOR STEAMING

OATMEAL

Take ½ cupful of oatmeal, 2 cupfuls of boiling water, and a half teaspoonful of salt. Go over the meal carefully to see that there is no foreign substance, then put in with the salt into the upper part of your steamer. Put the upper part of steamer over the fire to boil, stirring it with a fork. When it has boiled for ten minutes, put it over the boiling water in the lower part of your "steamer," and cook for one hour.

BOILED CUSTARD

1 cupful scalded milk; 1 teaspoonful of sugar; 1 egg, and of flavoring ½ teaspoonful.

First beat the egg until frothy, then add to

it the sugar and a pinch of salt. After mixing well, add the scalded milk and put over boiling water. Stir until it thickens. Then strain, and when it is cool put in the flavoring.

STEAMED APPLES

Wipe, core, and pare sufficient apples. Then place them in a steamer, and steam until they are soft.

STEAMED POTATOES

Take a sufficient quantity of potatoes; wash and pare them. Put them into your steamer, and let them cook until they are soft.

LESSON XXII

MIXING BATTERS AND FRITTERS

Flour and a liquid are mixed in the proportion of rather more of the flour than of the liquid. If a cup is used as the basis of measurement, a cupful of flour would be used to rather less than a cupful of liquid. It is not sufficient to merely put the flour and the liquid together. If baked in this way, the product would be heavy and solid and hard. It is necessary to make it light; and this is done either by stirring or beating. The effect of this treatment is to mix in bubbles of air. Sometimes soda is used to generate bubbles of gas. The mixture then must be cooked quickly before the air or gas has time to escape. In a cooked mixture the air or gas spaces are larger than when it was in the state of batter. This is because the air at the ordinary temperature occupies about one-third the space to which it will expand when heated in the oven while the mixture is cooking.

It is of the greatest importance to see, before the batter is mixed, that the fire is in a suffi-

ciently good condition to bake the batter quickly, else it will be heavy and unfit for food. It is also necessary to have the pans ready, so that no fatal delay occurs. Have this all seen to before beginning to mix.

We stir to mix intimately two or more materials. If the matter used be dry, stir round and round in the mixing bowl until the ingredients cannot be distinguished from each other. If a liquid is stirred into a dry ingredient, do not put all the liquid in at once, but add it slowly and at intervals, stirring slowly so as to avoid spattering. Slow addition of the liquid will prevent the mixture from being too thin. Do not stir with the edge or the tip of the spoon alone; the bowl of the spoon is most effective in stirring, because it mashes the lumps and makes an even batter, which is the desired result. A mixture of flour and water makes a thickening for sauces or gravies. Flour, butter, and milk form a sauce when stirred.

Eggs, doughs, and batters are beaten, not stirred. The object is to make them light, and to introduce bubbles of air; these are held more firmly by the albumen of the egg and the gluten of the flour, which are sticky substances. So long as we beat rapidly the bubbles form and remain; but if we beat and stir together, the stirring motion breaks down all of the bubbles

formed by the beating. The mixing bowl is tipped over to the side and the spoon is carried through the mixture from side to side and reaching the bottom of the bowl at each stroke.

It has been said before that the fire must be hot for cooking batters. But if it is too hot, the bubbles of air are too suddenly and violently expanded so as to break through the mixture and escape. As a consequence the mixture falls and becomes heavy.

Batters are cooked in well-greased vessels. The fat heats very quickly and rapidly cooks the outside, forming a crust. By a well-greased griddle is meant one in which the fat is evenly distributed over the surface. It does not mean the use of a great quantity of fat. Care should be taken not to use more fat than is required. If eggs and butter are used in a thin batter, much fat will be needed. If more fat than is necessary be used it is absorbed by the food, which is thereby rendered unwholesome.

LESSON RECIPES FOR MIXING

GRIDDLE CAKES

1 teaspoonful baking-powder; 1 cupful flour; ¼ teaspoonful salt; 1 cupful milk, scant; 1 egg; ½ teaspoonful butter, melted.

Sift the baking powder, salt, and flour to-

gether into a bowl. Beat the egg, add the milk to it, and stir it gradually into the dry ingredients, to make a smooth batter. If the butter is used, melt it, cool it, and stir it into the batter. Scrape it into a pitcher, or dip it from the bowl with a tablespoon, to form round cakes. Place an iron or soapstone griddle over the fire, grease it with a little dripping. When the fat begins to smoke, pour on a little of the batter from the pitcher or dip it out with a tablespoon. Put on the griddle about seven cakes, if the utensil is large enough. When the cakes are full of bubbles, turn them over with a broad knife, so that both sides may be brown. Serve on hot plates with syrup, or butter and sugar, or place them in layers with butter, sugar, and cinnamon between, and cut like a pie.

By using ½ cupful of corn meal, rye, Graham, or bread crumbs, instead of ½ cup of the flour, in this recipe, varieties of griddle cakes may be made. By adding to this recipe ½ cup cold boiled rice, hominy, wheatena, oatmeal, or canned corn, still farther variations may be developed.

POPOVERS

¼ teaspoonful salt; 1 cupful flour; 1 cupful milk; 1 egg.

Sift the flour and salt into a bowl. Beat the

egg, add the milk to it, and stir gradually into the flour to make a smooth batter. Beat with an egg-beater until full of air-bubbles. Fill hot, grease gem-pans two-thirds full. Bake on the floor of a quick oven, until brown and popped over. Break one open to see if it is firm, and not doughy. Serve hot with butter, as a breakfast muffin. By adding ½ teaspoonful butter, 1 tablespoonful sugar, and a sprinkle of grated nutmeg, the popovers are eaten as sweetened tea-muffins. They can be served with a hot pudding sauce, as a dessert, and are then called German puffs. When they puff up, a hollow space is usually left in the centre. This may be filled with a thickened custard, and they will make very good cream puffs.

CREAM FILLING

1 cupful milk, scalded; 1 egg; 1 tablespoonful sugar, sprinkle salt; 1 tablespoonful corn starch; sprinkle nutmeg, or ¼ teaspoonful flavoring.

Beat the egg, add the sugar and salt, pour into the mixture 1 tablespoonful of cold milk. Stir in the corn starch to make a smooth paste. Pour in the scalded milk, and stir it well. Cook the mixture in the double boiler, stirring constantly for ten minutes. Put the custard (when cold) into the popovers, or into cream puffs.

CARAMEL SYRUP

Put 1 cupful granulated sugar into a frying-pan. Stir it over a moderate fire until it is melted into a light-brown liquid. Remove from the fire and pour into it ½ cupful of boiling water. Heat and stir until the water melts the clear, hard candy. Pour into a pitcher, and serve hot or cold with griddle cakes.

LESSON XXIII

LARDING, BLANCHING, BONING

LARDING

Larding is performed by introducing fat strips of meat, ham, and bacon into poultry and meats which are naturally dry and devoid of flavor. The meats which are usually so treated are turkey, rabbits, veal, and chickens. The larding meat is cut into thin strips and is inserted at intervals of about an inch in the breast of the fowl or over the surface of the meat, by means of a larding needle. This is a short, thick needle with an opening or slit, controlled by a spring, into which the strips of bacon are inserted. They are practically sewed into the meat. A portion of the meat to be larded is pinched up and the needle forced through. When the strip of bacon is forced through by the needle the charge of larding meat is released from the needle. Then the needle is withdrawn. Under the heat of the fire the fat dries out and bastes the fowl, rendering the meat juicy, and at the same time imparting a flavor. Meat when so treated is described on the menu as piqué.

BLANCHING

To blanch meat or vegetables is to plunge them into boiling water for a given length of time, generally two or three minutes; then throw them into a bowl of spring water and leave them until cold. With meat this is done for the purpose of giving firmness to the flesh, and thus facilitating the operation of larding, and also to preserve the whiteness of certain meats, such as rabbits or fowls. With vegetables it is done to keep them green, and to take away their acrid flavor. Ox tongues and almonds, fruit kernels, etc., are said to be blanched, when through the action of hot water the skin can be easily peeled off; calves' heads and feet are blanched to soften them, and thus make them easier to trim.

BONING

This is a method of treating fowl so as to remove the bone, or carcass, from the flesh, and yet to leave the flesh in its original form.

To those to whom even carving is a hardship this may seem a difficult task.

In boning a chicken, make an incision from the neck to the rump of the fowl, down the breast; cut the neck off short; take out the crop; pull the skin well back to the wings; dis-

joint the wings under the skin; clear the whole body down to the legs; draw back the legs so as to expose the sockets and cut the ligaments; peel the flesh-skin off to the tail; cut through the "tail piece" inside of the skin; and then turn the carcass out. The shape of the fowl is then preserved by proper stuffing.

Other fowl are boned in the same way.

LESSON RECIPE FOR BONING

BONED SHOULDER OF VEAL

Place a clean cloth upon the table, and upon this lay the veal, skin side down. A sharp, strong knife is needed. Cut off the flesh on the inner side nearly down to the blade-bone; detach the edge of this first; then work the knife under it, keeping close to it. Care must be used not to pierce the outer skin. When the bone is separated from the flesh in all parts, unsocket it with the knife, and withdraw it. Then take out the second joint in the same way. With a little practice the two parts of the bone may be withdrawn without separating them. The knuckle-bone is, of course, left in. The greatest care is required that during the operation the outer skin be not pierced or broken. The meat is then ready for stuffing.

LESSON XXIV

BEVERAGES

COFFEE, TEA, AND COCOA

BEVERAGES are made and used for the purpose of quenching the thirst; and whether it be tea, coffee, chocolate, or any other beverage, it is really the water contained in them which quenches the thirst. Therefore, pure water is best adapted to quenching the thirst.

LESSON RECIPES FOR BEVERAGES

COFFEE

The coffee bean or berry is the seed of the coffee plant, which grows in tropical countries. It contains tannin and theine (called caffeine in coffee); the caffeine acts as a pleasant and stimulating tonic: the tannin is inclined to interfere with the digestion if taken in too large quantities. The flavor and odor of coffee come from the oils contained therein. Coffee of moderate strength seems not to be harmful to any great extent to adult persons, when taken in reasonable quantities, but should not be given to chil-

dren, because it prevents the bodily tissues from wearing out to a certain extent, and children, who are growing, require a constant renewal of all parts of their systems. It stimulates the nerves and relieves fatigue. Much of the prevalent bad health comes from the excessive use of coffee. There are many good substitutes for coffee, made of various roasted grains, which, while not so powerful in their tonic effects, supply an ample beverage, and are harmless to children, and wholesome.

Coffee should be purchased roasted, but unground; and should be ground as used, as it loses its flavor very rapidly after being ground. It should always be kept in an air-tight receptacle. The coffee-pot should be thoroughly cleaned and scoured each time after it has been used. For the black after-dinner or filtered coffee have it powdered. It should be finely ground when making boiled coffee.

To make good boiled coffee use 1 tablespoonful of coffee to each cup of boiling water, regulating this by the number of cups desired. Put the coffee into the pot; pour the water in, and let it come to boiling point. Then stir into it a slightly beaten egg; boil for one minute, and set on a part of the stove where it will keep perfectly hot without boiling.

HOW TO MAKE AFTER-DINNER COFFEE

For this purpose a French coffee-pot is best. The coffee, to be strong, should be in the same proportions—1 tablespoonful of coffee to each cup of boiling water. After putting the coffee into the filter, pour over it into the pot the boiling water. Put the pot in hot water and when the water has all filtered through, pour it into the filter again.

TEA

The principal value of tea is the one substance contained in it—theine: this is stimulating and pleasant, when not taken in excess and when the tea is made right. Tea also contains tannin, a bitter substance used for ink-making, and also for tanning leather.

How to Make Good Tea.—Use only good tea; it is expensive, but cheap teas are likely to be adulterated, and good tea is economical in the end. It should be kept in an air-tight canister or jar, otherwise it will rapidly lose its flavor. Use only a china, earthen, or silver teapot. Boil the water quickly and use it only at that point and in a hot teapot. It should be steeped about five minutes. You should never allow it to boil.

Take from 1 to 3 teaspoonfuls of tea to 2 cupfuls of boiling water. Scald the pot first, and

when you have the water boiling, put the tea into the pot and let it steep for three to five minutes. If you find it too strong, you can weaken it by adding hot water, but in doing this the water should be almost at the boiling point.

COCOA AND CHOCOLATE

Cocoa and chocolate are products of the seeds of the chocolate tree, which grows in the tropical countries of America. Cocoa for our breakfast beverage is produced by extracting, under powerful pressure applied to cracked cocoa beans, the greater percentage of its fatty substances, and then powdering. The fat so secured is cocoa butter. Cocoa differs from tea and coffee as a beverage in that with the former we drink the powdered product itself, while in the case of tea and coffee we leave the leaves and grounds at the bottom of the pot.

BREAKFAST COCOA

For this we need 1 pint of scalded milk; 1 pint of boiling water; 2 tablespoonfuls of prepared cocoa; from 2 to 4 tablespoonfuls of sugar. Mix the cocoa and sugar, then gradually stir in the water and let it boil for five minutes, then put in the milk, and cook for five minutes more. Beat with an egg-beater.

LESSON XXV

VEGETABLES

Potatoes contain a very large proportion of water. The solid part is only about one-quarter of the bulk of the potato and is largely starch, with a small quantity of albumen and salts held in solution in the water. There is very little starch in new potatoes. Starch is not formed until the potatoes ripen.

The chief point to be observed in cooking potatoes, and indeed all vegetables, in water, is to see that as little as possible of the nutritious elements are lost in the process. In the case of potatoes there is much difference of opinion as to whether or not they should be pared before cooking. There is no doubt that it is much more convenient to peel them when hard and cold than when soft and hot. Besides, they are more easily and daintily served. But some contend that there is a quantity of earthy matter or salts immediately under the skin, which is lost in paring.

If a potato is boiled without paring at all, the starch grains swell and the skin of the po-

tato bursts. For this reason a circle of the skin is pared even when they are cooked with their jackets on. As potatoes are subject to disease, the affected parts are more easily removed by paring before cooking, and this prevents the absorption of bitter juices during the process. The salts which are lost in cooking the potatoes when pared are supplied in the form of salads, green vegetables, and fruits. If potatoes are not pared before cooking, they must be well scrubbed, so that no earthy matter may adhere. When the potatoes are new, the skin is removed by scraping instead of paring.

After the potatoes are pared they must either be put on at once, or, if it is necessary to keep them standing, they must be covered with water. Pared potatoes left without water turn brown by reason of the action of the oxygen of the air upon them.

They must be put on in boiling water, because cold water has the power of extracting the albumen and other nutritious matter, while boiling water hardens the albumen cells and no matter is lost. The water ought not to boil violently, for that will cause the potatoes to burst and break up.

Salt is added not to give the potatoes a flavor, for that is best done at the table to suit the varying individual tastes, but salt raises the

boiling point of the water. This means that salt water gets hotter than fresh water before it boils. Consequently it reduces the danger of loss of salts and other matter.

As soon as a fork passes easily through the potatoes they must be taken up at once. Then they are drained, and the cover must be left off, for much water remains in the form of steam and must pass off in that form, else, when the vessel cools, the steam will condense into water and the potatoes will be wet instead of dry and mealy.

Potatoes must be selected nearly of one size to produce uniformity in cooking. It takes large potatoes longer to cook than small ones; so, if the potatoes are not nearly of equal size, the small ones will be overdone while waiting for the larger ones to cook. A large potato may be cut in two to make it cook more quickly.

All vegetables should be washed very quickly, as the cold water will, if allowed to act long upon them, extract valuable nutritious ingredients.

The following vegetables should be well scrubbed before preparing: Potatoes, parsnips, carrots, turnips.

Beets are to be washed carefully, so that the outer coat be not broken. It is full of sugary juice, which escapes if the skin be broken. For

the same reason, the tops are not cut off too closely before cooking. In selecting beets, do not accept any that are not fresh. The same rule applies to all vegetables. Do not take them if they are shrivelled or wilted. If such must be used, putting them for a little while in cold water will freshen them. There are several varieties of table beet, which differ very much in size, color, shape, and sweetness. The small red and the long yellow are the best varieties.

When the beet is cooked, it is only necessary to cut off the skin, not to peel the beet. If the beets are young and small, slice them lengthwise; if large, slice them round. Hot beets are not healthy, if eaten in large quantities. They should be served cold, in vinegar.

Parsnips have the advantage not only of being wholesome and nourishing, but are in season both summer and winter. In the spring months, when other vegetables are scarce, parsnips are plentiful. As they are biennials they are left in the ground during the winter, even in the most severe climates, and are dug in the spring. Great care must be taken in cleaning and preparing parsnips for cooking. The flesh is very white, but darkens on boiling. Every particle of speck or blemish must be removed by scrubbing and cutting, and the fine roots must be trimmed off. Parsnips take from

twenty minutes to one hour to cook, according to the season of the year and the size of the vegetable. All vegetables take longer to cook in winter than in summer. If the parsnips are small, they may be cooked whole; but if large, they must be sliced down the middle.

Carrots must be scrubbed, and the outer skin scraped off. They take from one and a half to two hours to cook.

Turnips should be first scrubbed, then sliced and pared. Select only medium-sized turnips, as the larger ones are more likely to be spongy or woody.

Small young turnips require from fifteen to twenty minutes in cooking; large ones up to a full hour.

Cabbage requires great care in preparation, as it is the home of insects and worms. They are best removed by cutting off the outer leaves and soaking the inverted head in cold water. It is then cut in quarters and boiled. Cabbage takes about twenty minutes to boil. It must be thoroughly done, for imperfectly boiled cabbage deranges the stomach and causes flatulency. It is of doubtful value as nourishment, but is a pleasing addition to a meal.

Cauliflower may be treated the same as cabbage in its preparation.

Celery must be separated, thoroughly washed,

and all rusty parts scraped off. The heart is the best of the stalk; the outer portions are tough and stringy. The tops, when green, are of value for garnishing, and for seasoning soup when green or dried. No green parts must be served. After cleaning it is best kept in cool water, to preserve its crispness until served. When used for salad, the pieces must be wiped dry. Spinach is a type of greens. It must be carefully picked over and washed in several waters. This is necessary to remove the particles of sand and grit. As it is a low-growing plant, heavy rains splash the leaves with earth and sand from the garden, and the heat of the sun afterwards dries it on, so that there is great difficulty in washing it clean. Unless all is removed before cooking, the dish is ruined. After boiling until it is thoroughly tender, the spinach is drained and the water pressed out so as to leave it as dry as possible.

Onions are prepared by peeling so as to remove all of the dried or withered parts, and then soaking in cold water to remove the excessive strength, or other objectionable qualities.

Green corn is prepared by husking, but is not to be washed. Care must be taken to remove every particle of corn silk, for while they are not objectionable in themselves they are horribly suggestive of hairs. It should be pro-

cured as fresh as possible, for even on the second day after picking it loses much of its flavor and becomes hard to digest. It takes from ten to twenty minutes to cook, according to size and age.

Peas and beans are to be shelled and washed very quickly. Care must be taken to discard the wormy or rusty portion of these. String beans are prepared by breaking off both ends, removing the strings, and cutting or breaking the bean into short pieces. After cooking until quite tender, which takes from forty to sixty minutes, they are to be well drained.

Asparagus is simply prepared by cutting off the lower part of the stalk, which is tough; though this may be saved as an agreeable seasoning to soup. The asparagus is then soaked in water for about a quarter of an hour. Then it is tied in a loose bundle, using a soft string, so as not to cut through the tender sprouts. About twenty minutes will suffice for cooking asparagus, if it is tender.

LESSON RECIPES FOR VEGETABLES

BAKED POTATOES

Choose potatoes of the same size. Put them into cold water, and scrub thoroughly with a small vegetable brush. Cut out any black por-

tions. Lay them on the grate of a hot oven, and bake them until soft. Try, by taking hold of one with an oven towel, and pressing it in the hand. A small potato usually requires twenty minutes, a medium-sized one thirty minutes, and a large one forty minutes. When done, crack each one open a little in the centre, to let the steam escape, and serve in a hot dish, covered only by a folded napkin. If any are left from the meal, peel them at once, so that they may not become watery or have an unpleasant taste.

CROUTONS

Cut stale bread in slices one-half inch thick. Cut off the crusts, and divide the slices into one-half inch cubes. Place them on a tin sheet, and bake them until golden brown. Serve with soups and stews, or as a substitute for sliced toast.

BREAD CRUMBS

Break stale bread into small pieces, put them into a shallow pan, and set it in a moderate oven. When thoroughly dry, roll or pound the bread to a fine powder. If wished very fine, sift, and roll coarse crumbs a second time. The crumbs are used in making stuffings for meats, in puddings and griddle cakes, and in covering fried food, such as oysters.

SOUTHERN SWEET POTATOES

Cut cold cooked sweet potatoes into slices, and put them in an earthen dish. Spread each layer with butter, sprinkle slightly with sugar, and bake until hot and slightly browned.

BROWN POTATO BALLS

Mash and season cold baked or boiled potatoes, or use cold mashed potato. Roll the potato mixture into balls, or pat into flat cakes. Place on a buttered tin, put a small piece of butter on top of each, and bake on the grate of a hot oven until golden-brown.

SURPRISE BALLS

Roll the potato balls as above, and with a teaspoon press a hollow in the top. Chop fine some cold, lean meat, season it with salt and pepper, and put 1 teaspoonful of the meat into the hollow of the potato ball. Put a little butter on the top of each ball, and brown in the oven on the grate.

CREAMED POTATOES

4 cold potatoes; ½ cupful milk; sprinkle pepper; ½ teaspoonful salt; 1 tablespoonful butter.

Cut the potatoes into cubes or thin slices. Put, with the milk, into a pan or double boiler,

and cook until they have absorbed nearly all the milk. Add the butter and seasoning, cook five minutes longer, and serve hot.

If desired, 1 tablespoonful parsley, chopped fine, may be added with the seasoning.

BOILED BEANS OR PEAS

Choose fresh, green beans or peas. Put them into a kettle with a very small quantity of boiling water—just enough to keep them from burning. Boil until they are soft. Remove from the fire; and, to 1 quart of the vegetables, add 1 tablespoonful butter, a sprinkle of pepper, and a little salt, if necessary. Serve in a hot dish.

BOILED CABBAGE

Wash the cabbage in cold water, trim off the limp outside leaves, cut into eight pieces, or, if it must be cooked quickly, chop it into smaller pieces. Put it into a kettle and cover with boiling water, allowing 1 teaspoonful salt to each quart of water. Do not cover the kettle, and there will be very little of the cabbage odor in the house. A young cabbage requires about forty-five minutes to cook. When tender, drain it well. The water may be changed each half-hour, adding fresh boiling salted water, in order to diminish the odor.

When the cabbage is done the water may be

drained off, and a little milk, 1 tablespoonful butter, 1 teaspoonful salt, and a sprinkle of pepper added. Boil up once, and serve.

Vinegar is generally placed on the table with boiled cabbage. Many persons like cabbage boiled in the water in which corned beef or ham has been cooked.

BOILED ONIONS

Put the onions into a pan of cold water, and holding them under the water, peel them. Put them into boiling water with 1 teaspoonful salt to 1 quart water. After cooking five minutes change the water, and after ten minutes more, change it again. Boil until tender. They usually require one-half hour to become soft. Pour off the water, add milk enough to cover them, and boil five or ten minutes longer. To 6 onions add 1 teaspoonful butter, ¼ teaspoonful salt, sprinkle pepper.

STEWED TOMATOES

Pour boiling water over the tomatoes and let them stand a moment. Remove, pour cold water over them, peel off the skins, and cut out the green stem. Cut into slices, put into an uncovered agate saucepan and boil fifteen minutes, or until they are soft and the juice is partly boiled away. To six tomatoes of me-

dium size add ¼ teaspoonful salt; ½ teaspoonful sugar; 1 teaspoonful butter; sprinkle pepper, and, if desired, ¼ cup fine cracker or bread crumbs. Boil the mixture up once. Canned tomatoes may be boiled in the same way, until thoroughly soft. To 1 pint of canned tomatoes, add the seasoning mentioned above.

BOILED BEETS

Scrub the beets without breaking the roots. Boil until they can be easily pierced with a skewer. When done dip into cold water, take out, rub off the skin, and cut off the tops and roots, and slice. Sprinkle with salt and pepper, and pour on melted butter, and serve. Always boil beets separately from any other food, on account of their color.

BOILED TURNIPS

Scrub the turnips, and pare off the thick skin. Cut in slices or quarters, and cook in boiling salted water until soft. Mash fine, and, with a wooden masher, press them in a fine strainer, or in a piece of coarse cheesecloth, to remove the water. To 1 pint of mashed turnips, add 1 tablespoonful butter, ¼ teaspoonful salt, a sprinkle pepper. Serve in a hot dish. A few boiled potatoes are sometimes mashed with turnips to make them dry.

CARROTS

Scrub, and scrape off a very thin skin. Cut each carrot into three or four pieces of equal size, and cook in boiling salted water until soft.

PARSNIPS

Scrub, scrape off a thin skin, cut each parsnip into quarters lengthwise, and cook in boiling salted water, from thirty to forty-five minutes, until soft. Place in a dish, and pour a white sauce over them, or serve with vinegar on the table. They may be buttered after boiling, placed in the oven, and baked a golden-brown.

DRIED BEANS AND PEAS

Pick them over and remove specks, pebbles, or wormy beans or peas. Soak in cold water overnight. In the morning pour off the water, add fresh cold water, and set on the back of the stove to heat slowly, and simmer until soft. If desired to use as soup, they may be boiled, after becoming soft, until they fall to pieces, and form a soft, pulpy mass. Split peas need to be soaked only one-half hour before simmering.

SPINACH

Pick off the roots and decayed leaves; wash thoroughly in three or four waters. Put the

spinach in a large kettle, without water. Put it on the stove where it will cook slowly until some of the juice is drawn out, then boil until tender. Drain and chop if liked. To ½ peck of spinach add 1 tablespoonful butter; ½ teaspoonful salt, and 1 sprinkle pepper. Heat again. Garnish with hard-boiled eggs.

SOME RULES FOR COOKING VEGETABLES

It is not necessary to soak fresh vegetables in cold water, and they should be cooked as soon as prepared. Wilted vegetables can be freshened by soaking in cold water.

For green vegetables use salted boiling water. They should be cooked rapidly. Time required for boiling depends upon the condition of the article.

When boiling such green vegetables as corn, peas, beans, celery, asparagus, and spinach, use as little water as you can. Only leave enough to moisten well. This saves a good deal of the matter which dissolves in water.

Cabbage and cauliflower should be boiled in an open kettle. A little soda is necessary.

With all other vegetables, excepting onions, which should be scalded and the water changed twice, they should be cooked in just enough water to cover, and drained thoroughly after cooking.

The common vegetables are prepared for cooking in the following manner:

Potatoes should be scrubbed, washed, and pared.

Beets should be washed without breaking the skin, to retain the juices.

Carrots, wash and scrub, and scrape off the outside skin.

Parsnips should be scrubbed thoroughly, and the fine roots removed.

Cabbage and cauliflower: These should be thoroughly washed and soaked after trimming. When soaking they should be put in the water top down, to remove insects, etc.

Spinach should be picked over carefully and washed several times.

Celery should be washed and cleaned, scraped until all parts are white.

Onions should be peeled and soaked.

Green corn should not be washed. It may be boiled with the husks on or not.

String beans should have the side strings removed and washed.

LESSON XXVI

CEREALS

These are to be cooked in a small quantity of water. For this reason, and also because they are glutinous and sticky, they are very likely to burn. Hence it is necessary to stir them constantly, when cooked in one vessel over the fire, to prevent them from burning. But this necessity of stirring can be done away with if the double boiler is used. The heat of the inner vessel, which is surrounded by boiling water, is lower than that of the water; and so it takes a long time to cook. The great advantage of slow boiling is that the flavor of the food is retained and the substance is not lost.

In cooking oatmeal for gruel we use a great quantity of water. Some of the water goes to moisten and swell up the dry meal.

When oatmeal is made into porridge the water used should be about three or four times the bulk of meal used.

When flour is to be mixed with water we use a little cold water first, because the grains of flour are so fine that they will not separate in

hot or boiling water. It is not so in the case of oatmeal. The grains are coarse, and hot water may be used at once. Cold water would draw out the starch from the meal and the mixture would be sticky, and when the meal was cooked it would be tasteless and pasty. So the oatmeal is mixed directly with boiling water. About a half teaspoonful of salt is added, because salt is wanting in sufficient quantities in the grain of the oat. It takes from forty minutes to one hour for oatmeal to cook properly: for it is necessary to moisten the gluten thoroughly. If it is cooked rapidly at first for about ten minutes, the starch grains of the meal will burst open. Then the porridge is to cook gradually for the rest of the period.

Rice may be cooked in a similar manner, but water to only twice the bulk of rice should be used.

LESSON RECIPES FOR CEREALS

STEAMED AVENA OR ROLLED OATS

1¼ cupfuls boiling water, or 1 cupful water, if cooked only fifteen minutes; ½ teaspoonful salt; ½ cupful Rolled Oats or Avena.

Put the salt and water into the top of a double boiler. Remove any black specks found in the oatmeal, and stir the grains into the water. Cover, and steam from fifteen minutes

to one hour. Serve with milk or cream, and sugar. Baked or steamed apples and other fruits are sometimes served with oatmeal.

SCOTCH OATMEAL

5 cupfuls boiling water; 1 teaspoonful salt; 1 cupful coarse oatmeal.

Pick over the oatmeal and put it with the salt and water into a two-quart covered boiler or pail. Set it on a stand in a large kettle of boiling water, and let it boil slowly all day or all night. This makes a jelly-like mass with a rich flavor. Do not stir it, since stirring makes it ropy.

STEAMED RICE

1¼ cups boiling water; ½ teaspoonful salt; ½ cup rice.

Look the rice over carefully, and pick out the specks, husks, or pebbles. Wash and scrub with the hands, in two or three waters, to make it white. Put it with the water and salt into the top of a double boiler and steam from forty-five minutes to one hour. Try it by pinching grains of the rice between the thumb and finger. If any gritty spots are found, cook it until perfectly soft. If it becomes very dry in cooking, add 1 tablespoonful hot water occasionally, until it is moist enough. A few raisins, seeded, cut into small pieces, and cooked with the rice, are

an improvement. If the rice is cooked in milk instead of water, 1½ cupfuls hot milk to ½ cup rice will be a good proportion. When the rice is done, press it into small cups, let it cool two or three minutes, and turn the shapes out on a pretty dish. Serve hot with sugar and milk, or with a soft custard poured around it.

SOFT CUSTARD

1 cupful hot milk; 1 sprinkle salt; 1 tablespoonful sugar; 1 egg; ¼ teaspoonful liquid flavoring, or 1 sprinkle spice.

Heat the milk in a double boiler, or in a dish or pan set into boiling water. If nutmeg or any spice is used, put it into the milk. Beat the egg slightly, add the sugar and salt, and pour the hot milk into the egg mixture, stirring it well. Put it all into the double boiler and steam it, stirring it constantly until it thickens. If it curdles, set the pan containing the custard into cold water, and beat with an egg-beater, or a fork, until smooth. Put the custard into a china or glass dish, to cool. When the steam has passed off the custard, the liquid flavoring may be stirred in. Serve cold, poured around boiled rice, as a sauce.

STEAMED APPLES

Wipe and core the apples. Pare them, if desired. Put them on a plate, and set the plate

on a stand, or on some nails, in a tin steamer, over a kettle of boiling water. Steam until soft, or from fifteen to thirty minutes. Serve with oatmeal, or separately with sugar and milk, or cream.

BOILED CORN-MEAL MUSH

1 pint boiling water; 1 cupful corn meal; ½ teaspoonful salt; ½ tablespoonful flour; 1 cupful cold milk.

Put the water on to boil. Mix the corn meal, salt, and flour; add the milk gradually to make a smooth paste. Pour it into the boiling water, stir well, and boil, stirring often, thirty or forty minutes. Serve hot with milk or cream. When cold, cut it in ½-inch slices, and brown both sides in a little hot fat. Serve with syrup on the table. This mixture is delicious, if cooked two or three hours in a double boiler.

STEAMED RHUBARB

1 cupful rhubarb; 1-3 cup sugar.

Wash the rhubarb and cut it into inch pieces without removing the skin, as this gives a pretty pink color to the juice. Put it in an agate double boiler without water, sprinkle the sugar over it and steam one-half hour, or until soft. Do not stir it, as it breaks the pieces.

LESSON XXVII

BREAD

The three essentials to good bread-making are:

1. The right kind of flour.
2. Good yeast.
3. Proper baking.

Bread may be made from any sort of flour, but wheat flour is the best, as it contains the proper proportion of gluten to make the bread of a sufficiently sticky mass. Rye flour alone makes a moist, heavy bread, and corn flour a dry crumbly bread. Either of the latter may be advantageously mixed with wheat flour to make good bread.

As a food, wheat is preferable to any of the other vegetable products, as it is more agreeable than corn and more nutritious than rice. It contains nearly all of the essential elements of nutrition. There are two varieties: red wheat and white wheat. The red is smaller, harder, more nutritive, though the flour made from it is not as white as that from the white wheat.

The chief adulterants of wheat flour are: rice flour, potato starch, pea meal, alum, plaster of Paris, and sulphate of copper, the latter being heavy and used to increase the weight. The great test for good pure flour is to press a handful tightly. On relaxing, the impression of the marks in the skin and the lines of the hand may be plainly seen on it.

Yeast is a vegetable growth of a fungous nature, easily seen under a microscope. It consists of a mass of circular, or oval, bodies, which increase or multiply at an astonishing rate, but are easily killed by heat, cold, pressure, or chemical agents. Brewer's or distillery yeast is that which rises to the top of fermenting malt liquors. It is about eight times as strong as ordinary yeast. The ordinary yeast is made from hops or potatoes.

The first process of bread-making is mixing. Place ½ teaspoonful of salt, ½ teaspoonful of sugar, and ¼ cupful of yeast, or ⅛ yeast cake dissolved in ¼ cupful of water, in a mixing bowl. Add 3 cupfuls of flour, and mix. Add flour enough to make the mass stiff enough to knead.

Kneading is the next process. This is done for the purpose of making the gluten elastic, of causing the parts to adhere to one another and to make the dough fine and even-grained. The

better the ingredients are mixed, the less kneading is required. The kneading must be kept up until the mass is quite elastic and until all stickiness has disappeared. Much depends on thorough kneading.

The next process is that of rising. The mass is placed in the mixing bowl again, covered with a cloth and a tin cover, and placed in a warm place (about 80 degrees) and allowed to rise. This will take longer in winter and in cold than in warm weather. In winter it may set overnight; in summer, from three to four hours. The rising of bread is caused by the growth of the yeast plant. The warmth and moisture cause it to grow. Boiling water will kill it; hence this must never be used in bread-making. As the yeast plant grows, the starch in the flour changes into sugar. The yeast plant changes the sugar into alcohol and carbon dioxide, or carbonic-acid gas. This is fermentation. The carbonic-acid gas, in its efforts to escape from the mass of elastic gluten, fills the dough with air-cells which make the mass light and spongy. When it has increased to twice its original size, it is again worked over or kneaded, in the bowl. It is again allowed to rise, when it is moulded or shaped into loaves, and is then baked in an oven of about 400 degrees. This heat has the effect of killing the yeast germ and thereby

stopping the fermentation. If this was allowed to go on, it would reach a point when the alcoholic fermentation would pass into the acetic fermentation and the dough would become sour. In baking, the alcohol passes into the oven, and the outer starch changes into gum, which forms the crust and is browned by the intense heat.

YEAST

Yeast is a plant, not the flowering plant to which most of us are accustomed, but one of the lower forms of vegetation referred to as germ plants. It is microscopic, and when magnified is seen as small rounded bodies. These increase very rapidly under proper conditions of heat and moisture. They remain inactive, however, both in a cool place and while they have nothing to feed upon. When mixed with warm water and flour they feed upon the flour and start to grow and to multiply. This growth sets upon a fermentation. During fermentation, which is aided by the diastase of the flour, alcohol and carbon dioxide are given off. The carbon dioxide is a gas, and as this gas tries to escape through the tough tissues of the flour, bubbles are formed in the dough. This has the effect of making the bread light, and also of causing the bread to rise. Boiling water causes the death of the yeast plant. For this reason boil-

ing water must never be used in bread-making. A certain degree of heat is necessary to the growth of the plant, so cold water or a cool place will retard the rising of the bread. There are two sorts of fermentation possible in bread-making: alcoholic and acetic. Acetic or sour fermentation is caused by the formation of acetic acid, which is the basis of vinegar. It is this that causes sour bread; therefore bread must not be allowed to rise too long. The heat of the oven has the effect of stopping the fermentation. If the bread is put into the oven too soon, the bread will be heavy. If too late, it will be sour. The perception of the proper time comes only from experience and practice.

In the making of yeast it is necessary to have some old yeast in order to supply a small quantity of the plant to the new mixture. This acts as the seed, and the other materials are the favorable conditions to the growth of the plants.

There are such good and cheap cultivated yeasts made by manufacturers in these days that it is hardly worth while to bother about making home-made yeast any longer. It can hardly be made so uniform as that prepared by brewers and distillers, and we recommend the use of this cultivated yeast at all times.

LESSON RECIPES FOR BREAD

BREAD

1 cup lukewarm milk, or 1 cup lukewarm water and 1 teaspoonful butter; 1 teaspoonful sugar; 1 teaspoonful salt; ¼ cake yeast dissolved in ¼ cup lukewarm water or ¼ cup liquid yeast; flour to make a stiff dough (3¼ to 3½ cups).

Scald the milk, add the sugar and salt, and cool it until lukewarm. Dissolve the compressed yeast in the lukewarm water, and add it. Stir in flour to make a dough stiff enough to handle. Scrape the dough out on a floured board, leaving the bowl clean, and knead the dough about fifteen minutes until smooth and elastic, so that, when pressed with the finger, the dough springs back. Place the dough in the bowl, grease the top with melted butter or dripping, to prevent a tough crust from forming and keeping the dough from rising. Cover the bowl with a towel, and set it in a warm place. Let the dough rise until double its bulk. Lay it on a board, and knead it again about fifteen minutes, being careful not to work in much flour, until the dough is smooth, even, and fine-grained. Shape it into biscuits or loaves, lay them in a greased pan, let them rise in a warm place, until double their bulk, and bake on the floor of a hot oven. Biscuit will require from

twenty to thirty minutes, and loaves from forty-five minutes to one hour. If the dough is mixed with water, butter may be added to prevent the bread from being tough. The butter should be melted and added to the lukewarm water. The quantity of yeast in the recipe will raise the dough to double its bulk in about six hours; $\frac{1}{3}$ of a cake of yeast will raise it in about four hours, and $\frac{1}{8}$ of a cake will raise it in about twelve hours.

BREAD MADE WITH A SPONGE

Use the bread recipe, mixing in only enough flour to make a thick batter. If liked, boil a potato, mash it, and stir it in. Let the batter rise overnight. In the morning, stir in enough flour to make a stiff dough, and knead or chop it until it is smooth and free from stickiness. Mould it lightly into loaves or biscuit. Let them rise until double their bulk, and bake. The potato is an advantage, since yeast acts quickly on cooked starch.

ENTIRE-WHEAT OR GRAHAM BREAD

Use the above recipe, doubling the quantity of sugar, and using for each cupful of flour, $\frac{2}{3}$ cup of entire wheat or Graham flour, and $\frac{1}{3}$ cup white flour. Proceed as in the preceding recipe, handling the dough lightly when kneading, since it is apt to be sticky.

RAISED CORN-BREAD

2 cupfuls yellow corn meal; ½ cake of yeast, and ¼ cupful lukewarm water; ½ cupful molasses; ½ teaspoonful salt; ¼ teaspoonful soda; 2 cupfuls rye meal.

Sift the corn meal into the mixing-bowl, and scald it with 1 cup boiling water, just enough to wet it; let it stand ten minutes, and add 1 cup cold water, enough to make a batter. Add the molasses, yeast, salt, soda, and rye. Beat well, cover, and let it rise in a warm place all night, or until it cracks open. Stir thoroughly, butter and flour tins, fill them one-half full, let the mixture rise to the top, and bake in a moderate oven two hours.

RAISED MUFFINS

2 cupfuls milk; 1 tablespoonful butter; 3 cupfuls flour; ¼ cake yeast or ½ cake yeast; 1 teaspoonful salt.

Scald the milk, add the butter, and cool. When lukewarm, stir in the yeast, salt, and flour, and beat well for five minutes. Cover, and set to rise about two hours, until double its bulk. Add sufficient flour to make a soft dough. Divide into small balls, and place in a deep gem-pan, cover and let rise to double their bulk. Bake about one-half hour. When served, pull them open, since cutting makes them heavy.

LESSON XXVIII

SALADS

A SALAD well prepared is a charming compound, and, when taken with plenty of oil, very wholesome, attractive, and agreeable; badly prepared it is an abomination. A Spanish proverb says that four persons are needed to make a good salad—a spendthrift to throw in the oil, a miser to drop in the vinegar, a lawyer to administer the seasoning, and a madman to stir the whole together. Lettuce is generally supposed to form the foundation of a salad, but there are few fresh vegetables that may not be used: and almost every known vegetable is, when plainly dressed, used cold for salads; and cold meat, fish, and game are served in the same way. Amongst the vegetables appropriate for salads may be named asparagus, artichokes, beetroot boiled, basil, celery, chives, cucumbers, chervil, cauliflowers, dandelion-leaves, endive, French beans, garlic, lettuces of all kinds, lentils, mustard and cress, mint, onions, parsley, potatoes, radishes, shallots, sorrel, tarragon, tomatoes, Windsor beans, and water-

cress. Though a variety in salads is easily secured, great care is necessary in the preparation of the dish, and three or four rules must be closely observed if the salad is to be a success. First, the vegetables must be young, freshly cut, in season, and in good condition. If possible, they should be gathered early in the morning, or late in the evening, and should be kept in a cool, damp place. Secondly, the vegetables should not be allowed to lie long in water. If withered, they may be put in for a short time to render them a little crisp, but if fresh, they should be simply rinsed through the water and dried immediately. Thirdly—and this point requires most careful attention—the vegetables must be rendered perfectly dry after washing. The best way of doing this is to drain the salad and shake it first in a colander or salad-basket, and afterwards in a clean napkin held by the corners and shaken lightly till the salad is dry. Fourthly, cut the salad with a silver knife, or tear it in shreds; do not prepare it until a short time before it is wanted, and on no account mix the salad-dressing with it until the last moment. It is a very usual and excellent plan to pour the liquid into the bottom of the bowl, lay the shred vegetables upon it, and mix the salad at table. A wooden fork and spoon are the best for this purpose. Salads may be garnished in various

ways, and afford ample opportunity for the display of artistic taste. Boiled beetroot cut into slices stamped into fancy shapes or cut into trellis-work, sliced cucumbers, olives, hard-boiled eggs cut into quarters or rings, radishes, nasturtium-leaves, and flowers, etc., may all be used. When these are arranged tastefully the salad presents a very attractive appearance. Of course the garniture must not entirely hide the salad.

LESSON RECIPES FOR SALADS

BOILED SALAD DRESSING

½ teaspoonful mustard; 1 teaspoonful salt; sprinkle cayenne; 1 even tablespoonful sugar; 1 egg; ¼ cup vinegar, or juice of 1 lemon; ½ cup milk; 1 tablespoonful butter, or 2 tablespoonfuls salad-oil.

Mix the 4 dry seasonings. Beat the egg, scald the vinegar and milk in separate dishes, and add them with the butter. Cook it in a double boiler, stirring constantly until it thickens like soft custard. If it curdles, beat it until smooth with an egg-beater. If desired cold, strain it into a china dish, and set away to cool.

The sugar may be omitted if preferred. If the seasoning is too strong, use smaller quantities. Try ¼ teaspoonful of mustard.

COLD SLAW

Take a fresh, crisp cabbage, and pull off the torn, dirty leaves. Cut it into several pieces, and shave each piece into thin strips, using the hard stalk as a handle in holding the piece. Strain the salad dressing, while hot, over the cabbage, mix it well, spread it out, and set it away to cool. When ready to serve, arrange in a neat mound in the centre of a clean dish. The amount of dressing in the recipe is sufficient for a 1-pound cabbage. If the cabbage is wilted, soak it for an hour or more in cold salted water.

LETTUCE SALAD

Pick the leaves off from the head of lettuce, look them over carefully to be sure that they are whole, clean, and free from insects. Wash them in cold water, and shake the leaves gently in a cloth to dry them; arrange on a flat dish with the smaller leaves inside the larger, and serve, with the cold salad dressing on the table.

MEAT SALADS

Cold lean mutton, lamb, pork, beef, chicken, or veal may be freed from fat, bones, skin, and gristle, cut into small neat pieces, stirred into the hot salad dressing, placed on the ice to get very cold, and served on a pretty dish.

An attractive way of serving these salads is to arrange lettuce leaves on a platter, and put a tablespoonful of the mixture in the centre of each leaf.

LOBSTER SALAD

The meat of a boiled lobster may be cut, and mixed with the dressing, and served in the same way as the meat. Bits of the lobster-coral are sometimes placed on top of the salad to give an ornamental effect.

POTATO SALAD

Boil 6 potatoes, cut in thin slices, pour the hot dressing over and let it stand until cold. 2 tablespoonfuls of chopped celery may be mixed with the potatoes, and 1 teaspoonful onion juice may be stirred into the dressing after it is cooked. Serve in the same manner as the meat salads. Sliced boiled beets are sometimes added.

TOMATO SALAD

Pour boiling water over 8 or 10 tomatoes, and let it stand a moment. Pour off, and add cold water. Slip off the skins, slice, and set away to become cold. Serve with the cold dressing. If desired, the slices of tomatoes may be served on lettuce leaves.

VEGETABLE SALAD

Remnants of cold cooked carrots, beans, beets, peas, and asparagus, and raw celery, may be cut in small, neat pieces, mixed with the hot dressing, and served when cold. A teaspoonful of onion juice added to the dressing is an improvement.

SALAD DRESSING

Salad dressings are frequently bought of the grocer, and sent to table in the bottle in which they are purchased. Though these creams are many of them very good, epicures in salad always prefer that the salad dressing should be prepared at home. Mayonnaise salad sauce is perhaps to be preferred to any other, and for this a recipe is given.

A foolish prejudice is felt by many persons against the use of oil in salads, but this is gradually disappearing, as the majority of those who are prevailed upon to overcome it end by being exceedingly partial to what they had before disliked, and they also find that oil tends to prevent the fermentation of the raw vegetable, and is, besides, an antidote to flatulency. Seeing, however, that this prejudice still exists, two or three recipes are given of salad dressings without oil as well as with it. It has

been already said that the dressing should not be mixed with the salad until the last moment. Nevertheless, it may always be prepared some hours before it is wanted, and stored in a cool, airy place. When salads are much used, a good plan is to make sufficient for two or three days' consumption, and to bottle it off for use.

No. 1. Put a saltspoonful of salt, ½ saltspoonful of white pepper, a teaspoonful of mixed mustard, a pinch of cayenne, and a teaspoonful of powdered sugar into a bowl. Mix these ingredients thoroughly, and add, first by drops and afterwards by teaspoonfuls, 2 tablespoonfuls of oil, 4 tablespoonfuls of milk, and 2 tablespoonfuls of vinegar. Stir the mixture well between every addition. The sauce ought to look like cream. A teaspoonful of tarragon vinegar may be added, or not.

No. 2. Boil an egg till hard, and lay it in cold water for a minute. Strip off the shell, and put the yolk into a bowl. Rub it well with the back of a wooden spoon, and put with it a teaspoonful of mixed mustard, a saltspoonful of salt, ½ saltspoonful of white pepper, a saltspoonful of powdered sugar, and a pinch of cayenne. Add, first by drops and afterwards by saltspoonfuls, a tablespoonful of oil, 6 tablespoonfuls of thick cream, and, lastly 2 tablespoonfuls of vinegar. Beat the sauce well between every addition.

Mince the whole of the egg, or cut it into rings, with which to garnish the salad.

No. 3 (Dr. Kitchener's recipe). Boil 2 eggs for a quarter of an hour. Lay them in cold water, and in a few minutes strip off the shells, and lay the yolks in a basin. Rub them till smooth with the back of a wooden spoon, and mix with them, very gradually, first a tablespoonful of water or thick cream, and afterwards 2 tablespoonfuls of oil. When these are well mixed, add a teaspoonful of salt or powdered sugar, a teaspoonful of made mustard, and, lastly, and very gradually, 3 tablespoonfuls of vinegar. Put the sauce at the bottom of the bowl, lay the salad on the top, garnish with the whites of the eggs cut into rings, and do not mix the salad till the last moment.

No. 4. Mix a saltspoonful of salt and ½ saltspoonful of pepper with a tablespoonful of oil. When the salt is dissolved, put in 4 additional tablespoonfuls of oil, and then pour the sauce over the salad. Mix thoroughly, and add a tablespoonful of good vinegar, and a tablespoonful of tarragon or cucumber vinegar. Mix again, and serve.

No. 5. Rub the hard-boiled yolks of 3 eggs till smooth, and mix in a saltspoonful of salt, a teaspoonful of raw mustard, a saltspoonful of powdered loaf sugar, ½ saltspoonful of white

pepper, and the well-beaten yolk of a raw egg. Add gradually 4 tablespoonfuls of thick cream, and 2 tablespoonfuls of strained lemon juice. Beat the dressing thoroughly between every addition.

No. 6. Beat the yolks of 2 hard-boiled eggs till smooth. Add a teaspoonful of salt, a teaspoonful of powdered sugar, a pinch of cayenne, ¼ of a tablespoonful of white pepper, and, gradually, 2 tablespoonfuls of oil, the strained juice of a lemon, and 2 tablespoonfuls of light wine.

No. 7. Rub the yolks of 2 hard-boiled eggs till smooth with a teaspoonful of vinegar. Add a teaspoonful each of mustard, sugar, salt, and pepper, a tablespoonful of claret, and a finely minced shallot or young onion. Beat in, first by drops and afterwards by teaspoonfuls, 4 tablespoonfuls of salad-oil, and, lastly, add a teaspoonful of tarragon vinegar and a tablespoonful of white-wine vinegar.

No. 8. Beat a spoonful of flour with the yolks of 3 eggs. Add a teaspoonful of mixed mustard, ½ saltspoonful of salt, ½ teaspoonful of pepper, 2 tablespoonfuls of vinegar, and 3 tablespoonfuls of water. Cut 3 ounces of streaky bacon into small pieces, and fry these till they begin to turn color. Pour in the salad mixture, and stir the whole over the fire till the cream is thick and smooth. Pour it out, and continue

stirring until cool, and add a little more vinegar and water if necessary. The sauce ought to be as thick as custard.

No. 9 (named Sauce à la Lowry). Beat the yolk of a raw egg. Mix with it a pinch of salt, a pinch of white pepper, and, gradually, 3 teaspoonfuls of salad-oil, a teaspoonful of essence of anchovy, and 2 teaspoonfuls of vinegar.

LESSON XXIX

PASTRY

In making pastry, the first thing to be remembered is that every article used in its preparation should be scrupulously clean; and in order to ensure this it is best to have all the utensils washed and thoroughly dried directly after they are used, and dusted when they are again required. In addition to this there must be good materials, a well-regulated oven, a cool room, and a cook who brings to her work a cool, light, quick hand, close attention, and a little experience. There are four principal kinds of pastry: puff paste; short crust, for family use; standing crust, for meat and fish pies; and brioche paste, which is a sort of dough used for loaves, rolls, and buns. As cool hands are required, it is best to wash them in water as hot as can be borne a minute or two before making the pastry. The heat of the oven should in most cases be moderate, and the door should be only opened when it is absolutely necessary during the process of baking. The best way of ascertaining if the oven is properly heated is to bake a small piece

of pastry in it before putting in the pie or tart. Standing crusts require a quicker oven than ordinary pastry. In all cases wetting the pastry much will make it tough.

PASTE FOR COMMON PIES

Very excellent pastry may be made with lard or dripping, instead of butter, or with a mixture of lard and dripping. Good beef fat, or suet melted gently down, and poured off before it has had time to burn, is very nearly as good as anything that can be used for making pastry for everyday use. Very palatable pies may be made from the dripping from roast beef, veal, pork, or mutton, though the last named is thought by some to impart a disagreeable flavor of tallow to pastry. The quantity of fat used must, of course, be regulated by the expense, and it may be remembered that a rich crust is neither so digestible nor so suitable for many dishes as a substantial light one, and that the lightness of pastry depends quite as much upon a light, quick, cool hand as on a large amount of butter or lard. The addition of a beaten egg or a little lemon juice to the water, or a teaspoonful of baking-powder to the flour, will make the paste lighter. It should be remembered, however, that though baking-powder is excellent for common pastry that is to be used immediately,

pies are more likely to get dry quickly when it is used.

PUFF PASTE

Dry and sift the flour, and prepare the butter. Equal weights of butter and flour may be used, or ¾ of a pound of butter to each pound of flour. Put a little salt into the flour, and make it into a paste by stirring gradually into it with a knife rather less than half a pint of water. Roll it out till it is an inch thick. Divide the butter into quarters: break one of these quarters into small pieces, and sprinkle these over the paste. Dredge a little flour over it, and turn it over, then repeat the process, until all the butter is incorporated with the paste. Let the paste rest for ten minutes between each two rolls. Equal parts of lard and butter may be used for this paste, and if the yolk of an egg or the strained juice of half a lemon be mixed with the water in the first instance, the paste will be lighter.

FRENCH PASTE, FOR MEAT PIES, HOT OR COLD

Put a pound of flour into a bowl, and rub lightly into it half a pound of fresh butter. Add half a teaspoonful of salt, and make the mixture up into a smooth stiff paste, by stirring into it 2 fresh eggs which have been beaten up with rather less than ¼ of a pint of water. Roll the pastry out, give it two or three turns, and bake

as soon as possible. Time, ten minutes to prepare.

LESSON RECIPES FOR PASTRY

PASTRY

1 heaping cup flour; ¼ teaspoonful salt; ¼ teaspoonful baking-powder; 2 tablespoonfuls shortening; ¼ cup or more cold water.

Sift the flour, salt, and baking-powder into a bowl, and rub in the shortening until the whole is reduced to a fine powder. Mix with the cold water to make a stiff dough. Scrape on a floured board, and pat and roll into a circular shape to fit the plate. Fit it loosely into the plate, allowing it to come a little over the edge, since it shrinks when baked. This makes two crusts for plates of ordinary size. Cottolene may be used as shortening.

SHORT-CAKE PASTE

2 cups flour; ½ teaspoonful salt; ½ even teaspoonful soda, and 1 slightly rounded teaspoonful cream of tartar, or 2 teaspoonfuls baking-powder; ½ cupful butter; 1 cupful sweet milk.

Sift the salt, soda, cream-tartar, and flour together, and rub in the butter, keeping it as cold as possible. Stir in the milk to make a dough just soft enough to handle. Turn it on a floured board; divide the dough into halves and roll

each piece out to fit a round tin plate. Bake at once, in a hot oven. When done, turn out each cake and lay it on the clean under-side of the baking-tin. With a thin, sharp knife, split the cake evenly, and lay the bottom crust on a china plate. Butter each half. Lay partly mashed, sweetened strawberries, peaches, apple-sauce, stewed rhubarb, or any hot cooked fruit suitable for pies, on the under crust, lay the upper crust over it, and serve as a pie. Powdered sugar may be sifted over the top. If liked, it may be served with cream.

APPLE PIE

Take 4 large apples for each pie. Pare, core, and slice thin. Lay them in a deep pieplate, and sprinkle over 1 tablespoonful sugar to each apple, and ½ tablespoonful water to each, and a little spice. If the apples are small, measure scant tablespoonfuls of sugar. Cover with a crust of pastry and bake until the crust is brown and the fruit is soft. About one-half hour is required. The apples may be stewed with the sugar and water, and used as directed in the recipe for shortcake paste, so as to make a pie with two wholesome crusts. Rhubarb may be washed, cut into pieces, sprinkled with 2 tablespoonfuls sugar to ½ cupful rhubarb, and cooked in the same way. Peaches, cherries, and

apricots may be cooked, also, in this way. Huckleberries, blackberries, and raspberries may be picked over, washed and sweetened with ⅓ cup sugar to 1 cup fruit, and baked in a pie, according to this recipe. Use only an upper crust for fruit pies, since, in baking, the juice soaks into the under crust, making it heavy and indigestible. In making fruit pies without an under crust always use earthenware plates.

LEMON PIE

3 even tablespoonfuls corn starch; 1 cup sugar; 1 cup boiling water; 2 even tablespoonfuls butter; 1 lemon (rind and juice); 2 yolks of egg; 2 whites of egg, and 1 tablespoonful sugar.

Mix the corn starch and sugar, pour on the boiling water and boil until clear. When slightly cooled add the butter, the lemon juice and grated rind and the beaten yolk, and cook. Line a plate with pastry, and when baked pour in the lemon-mixture. Whip the whites until stiff, and beat in the sugar. Drop it on the pie, and brown on the grate 2 or 3 minutes. This makes one large pie.

MINCE PIE

1 cupful raisins; 1 egg, beaten; 1½ cupfuls currants; ¼ teaspoonful salt; ½ cupful cut

citron; ¼ teaspoonful cinnamon; juice and rind of 1 lemon; ⅔ cup molasses; ½ cupful tart jelly or fruit-juice; 2 tablespoonfuls vinegar; 2 Boston crackers; ½ cupful sugar; ¼ teaspoonful cloves.

Seed and chop the raisins, wash the currants, roll the crackers fine. Mix all the ingredients together, boil ten minutes, and bake with an upper and under crust. The egg may be omitted, and 3 cupfuls apples, 1 cupful meat, and ¼ cupful beef suet chopped together, may be added, and the mixture boiled and stirred from twenty to thirty minutes until the apples are soft.

BRIOCHE PASTE

Brioche paste may be served in a great variety of ways, all of which are excellent. It may be baked in one large cake; in fancy shapes, such as rings and twists; or in small loaves, rolls, or buns. Gruyère and Parmesan cheese or sweets may be introduced into it, or small portions may be stewed in soup, or fried, or used as the outer crust in which rissoles are cooked. Its most usual form, however, is that of a sort of double cake, the two parts being moulded separately, and moistened before they are joined, to cause them to adhere closely to one another. The upper portion of the brioche should be made smaller than the lower one, and

the entire cake should be brushed over with beaten egg before it is put into the oven. When jam is put into brioches, it should be mixed with part of the paste, and the rest rolled out, and put round it, so as to keep the fruit from boiling out. Cheese, on the contrary, should be well mixed with the paste, which should then be baked in the ordinary way. Gruyère cheese should be cut into small dice, and Parmesan cheese grated for this purpose. Brioche paste is best made on the evening of the day before it is wanted, as it requires to lie in a cool place for some hours before it is baked. Though delicious, it is considered rather indigestible. It must be baked in a well-heated oven. The quantity only which will be wanted for immediate use should be made at one time, as brioche paste will not keep. When properly prepared it is light and springy to the touch before it is baked, and it ought to rise in the sponge to fully twice its original size. It is made as follows: Take 1 pound (weighing 16 ounces) of dried and sifted flour. Divide it into 4 parts, and with 1 of these parts make the leaven. To do this, put the flour into a bowl, make a hollow in the middle of it, and pour into this hollow half an ounce of yeast dissolved in a spoonful or two of warm water. Add as much water as is required to make the whole into a soft smooth paste; gather it into

a ball, and put it into a bowl large enough to contain 3 times its quantity. Score the paste lightly across the top with the blunt side of a knife, cover with a cloth, and put it in a warm place to rise; it will be ready in about twenty minutes. Whilst it is rising take the remaining 3 parts of the flour. Make a hole in the centre, and put into this hole a quarter of an ounce of salt, half an ounce of powdered sugar dissolved in 2 tablespoonfuls of tepid water, 10 ounces of butter, which has been washed in two or three waters, squeezed in a cloth to free it from moisture, and broken into small pieces, and 4 eggs freed from the specks. Work all gently together with the fingers, and add one by one 3 more eggs, until the paste is quite smooth, and neither too hard to be worked easily nor so soft that it sticks to the fingers. When the leaven is sufficiently risen, put it upon the paste, and mix both together with the fingers gently and thoroughly. Put the dough into a basin, and leave it in a warm place all night. Early on the following morning knead it up afresh, let it rise two hours longer, and knead once more before it is baked. Brioche paste should be put into a well-heated oven. The time required for baking depends, of course, upon the size of the cake. Its appearance will soon show when it is done enough. The materials here given, if

baked in one cake, would require about half an hour. Sufficient for half a dozen persons.

PUDDINGS

Attention is all that is required, and a little manual dexterity in turning the pudding out of the mould or cloth. Let the several ingredients be each fresh and good of its kind, as one bad article, particularly eggs, will taint the whole composition. Have the moulds and pudding-cloths carefully washed when used, the cloths with wood ashes, and dried in the open air. Lay them aside sweet and thoroughly dry. Puddings ought to be put into plenty of boiling water, which must be kept upon a quick boil; or baked, in general, in a sharp but not scorching oven. A pudding in which there is much bread must be tied loosely, to allow room for swelling. A batter pudding ought to be tied up firmly. Moulds should be quite full, well buttered, and covered with a fold or two of paper floured and buttered. Eggs for puddings must be used in greater quantity when of small size. The yolks and whites, if the pudding is wanted particularly light and nice, should be strained after being separately well beaten. A little salt is necessary for all potato, bean, or peas puddings, and all puddings in which there is suet or meat, as it improves the flavor. The several ingredi-

ents, after being well stirred together, should in general have a little time to stand, that the flavors may blend. A frequent fault of boiled puddings, which are often solid bodies, is being underdone. Baked puddings are as often scorched. Puddings may be steamed with advantage, placing the mould or basin in the steamer, or three parts dipped in a pot of boiling water, which must be kept boiling, and filled up as the water wastes. When the pudding-cloths are to be used, dip them in hot water and dredge them with flour; the moulds must be buttered. Plain moulds or basins are easily managed. When a pudding begins to set, stir it up in the dish, if it is desired that the fruit, etc., should not settle to the bottom; and, if boiled, turn over the cloth in the pot for the same reason, and also to prevent it from sticking to the bottom, on which a plate may be laid as a preventive. The time of boiling must be according to size and solidity. When the pudding is taken out of the pot, dip it quickly into cold water. Set it in a basin of its size. It will then more readily separate from the cloth without breaking. Have the oven very clean for all uses, cleaning it regularly before lighting the fire. Take care that the juice of pies does not boil over, or the liquid contents of puddings; and remember that sugar, butter, and suet become

liquids in boiling. It is from their excess that puddings often break. Be, therefore, rather sparing of sugar; for if you have much syrup you must have more eggs and flour, which make puddings heavy. It is often the quantity of sugar which makes tapioca and arrowroot, boiled plain, troublesome to keep in shape when moulded. Rice or other grain puddings must not be allowed to boil in the oven before setting, or the ingredients will separate and never set; so never put them into a very hot oven. As a rule, we may assume that such flavoring ingredients as lemon-grate and juice, vanilla, and cocoanut, are more admired in modern puddings than cinnamon, cloves, and nutmeg.

BATTER PUDDINGS

Care must be taken to mix batter puddings smoothly. Let the dried flour be gradually mixed with a little of the milk, as in making mustard or starch, and afterwards, in nice cookery, strain the latter through a coarse sieve.

Puddings are lighter boiled than baked. Raisins, prunes, and damsons for puddings must be carefully stoned; or sultanas may be used in place of other raisins. Currants must be picked and plunged in hot water, rubbed in a floured cloth, and plumped and dried before

the fire; almonds must be blanched and sliced; and in mixing grated bread, pounded biscuit, etc., with milk, pour the milk on them hot, and cover the vessel for an hour, which is both better and easier than boiling. Suet must be quite fresh and free of fibres. Mutton suet for puddings is lighter than that of beef; but marrow, when it can be obtained, is richer than either. A baked pudding has often a paste border or a garnishing of blanched and sliced almonds about it, but these borders are merely matters of ornament; if moulded, puddings may also be garnished in various ways, as with bits of currant jelly. The sweetness and flavor of puddings must, in most cases, be determined by individual taste. Sugar can be added at table.

" Plum puddings, when boiled, if hung up in a cool place in the cloth they are boiled in, will keep good some months. When wanted, take them out of the cloth, and put them into a clean cloth, and as soon as warmed through they are ready."

In preparing meat puddings, " the first and most important point is never to use any meat that is tainted; for in puddings, above all other dishes, it is least possible to disguise it by the confined process which the ingredients undergo. The gradual heating of the meat, which alone would accelerate decomposition, will cause the

smallest piece of tainted meat to contaminate the rest. Be particular also that the suet and fat are not rancid, always remembering the grand principle that everything which gratifies the palate nourishes."

A pudding cloth, however coarse, should never be washed with soap; it should just be dried as quickly as possible, and kept dry and free from dust, and stowed away in a drawer or cupboard free from smell.

LESSON RECIPES FOR PUDDINGS

BAKED RICE PUDDING

½ cup rice; 2 teaspoonfuls sugar; ½ teaspoonful salt; 1 quart skimmed milk, or 1 pint full milk, and 1 pint water.

Pick over and wash the rice. Stir it into the milk with the sugar and salt. Butter a pudding dish, pour in the milk and rice; bake slowly two hours, covered, then uncover and brown. Seeded raisins may be added.

INDIAN TAPIOCA PUDDING

3 tablespoonfuls tapioca; 2 tablespoonfuls Indian meal; 1 teaspoonful butter; 1 teaspoonful salt; 1 quart milk; ¾ cup molasses.

Soak the tapioca in hot water. Soak the meal in ¼ cupful of the milk, heat the rest of the milk.

Mix together the first 4 ingredients, add the hot milk and molasses. Turn into a buttered baking dish, bake about one hour.

Peaches may be used instead of apples.

APPLE TAPIOCA

¾ cupful tapioca or sago; 1 quart hot water; ½ teaspoonful salt; 6 or 7 apples; ½ cupful sugar, cinnamon or nutmeg, sugar.

Pick over and wash the sago, soak about one hour. Pour on the hot water, cook till clear; stir often, add the salt. Pare and core the apples, slice or put whole in a buttered baking-dish, sprinkle sugar and spice over them, and turn in the sago. Bake till the apples are soft. Serve with milk and sugar.

BREAD PUDDING

1 pint milk, scalded; 1 cup bread crumbs; 1 teaspoonful butter; 1 lemon; ½ cup sugar; 2 eggs.

Add the sugar and crumbs to the scalded milk, add the butter and lemon rind. Beat the yolks of the eggs and add them. Bake in a buttered dish thirty minutes. Cool, and spread the beaten whites over the top. Add to the whites in beating the juice of the lemon and ½ cup powdered sugar.

LESSON XXX

CAKE-MAKING

The average girl, when learning to cook, wants to start right in with cake. This probably comes more from her fondness for the article itself than from a desire to begin with something easy, for to make good cake is one of the most difficult of all embraced in cookery.

CHEMISTRY OF CAKE

The eggs and milk which go into the cake are nitrogenous foods; the flour, butter, and sugar, carbonaceous; and while all of these ingredients, when taken by themselves, are not only perfectly harmless but wholesome, they become, in combination with each other and baked, rather the reverse under some conditions, and difficult to digest.

TO MAKE CAKE

The first rule to be observed in making cake is to exercise great care in measuring the ingredients. The recipes found in this work on cooking are all tried, and success will follow for

those who give strict attention to the directions. Next in importance is the baking, and here again great care must be exercised. In addition to this one must use only good flour and fresh eggs and butter. For these reasons it will be well to observe the following rules in connection with this subject:

Cakes made with butter as an ingredient, which by the way are more difficult to digest because heating the butter makes it more difficult of digestion, should be baked in an oven with a moderate heat (220° Fahr.), while layer cakes need to be baked more quickly, and should have from 280° to 300° Fahr. Such cakes as angel's food require even a less amount of heat (212°).

A tin basin should not be used in beating together the butter, sugar, and eggs. If you do use one, your ingredients are likely to be discolored. For this purpose a wooden spoon and a white enamelled basin are well adapted.

Carefully measure out all the materials called for by the recipe, before beginning. Then you are not so apt to make mistakes.

Keep the whites and yolks of eggs separate, unless the recipe tells you particularly not to do so. Sometimes the latter is necessary.

Beat one thing at a time before adding the next ingredient; *i. e.*, first the butter before

adding the sugar, then these two ingredients until very light before adding the eggs, when no directions to the contrary are given. A teaspoonful of baking-powder always signifies a rounding teaspoonful. Be sure that dried fruits such as raisins, etc., are perfectly clean and well floured. They should be added to the cake always just before putting into the oven.

If you find that the fruits go to the bottom, you should thicken the batter by adding flour, for in that case your batter is not thick enough to hold them in place.

Use suet for greasing the pans. It will prevent burning or sticking to the pan, which often happens where butter is used for this purpose. For fruit cake, and cakes rich in butter, always line the cake-tin with greased paper.

The oven should be in the right condition, and the cake put in as soon as it is mixed.

If you find that your oven is too hot, which sometimes happens where a thermometer is not used, the temperature may be reduced by placing a pan of cold water in the oven. The only sure way of having the oven right is to use a thermometer.

If you jar the stove or open and close the door before the cake is set, it will fall. Therefore, if necessary to ascertain the temperature of the oven, open and close the door very carefully.

Care must be exercised to ascertain whether or not the cake is thoroughly done before taking it out of the oven. Wherever you find the time given for baking in a recipe, you must take into consideration that this is based upon the temperature as regulated by a thermometer. If, then, you have not your oven at the proper temperature, your baking time may be wrong. Another argument in favor of the use of a thermometer.

Always be careful in taking the cake from the oven. Put your ear to it, and if you hear it tick you will know it is not done.

CAKES

In making cakes, great care should be taken that everything which is used should be perfectly dry, as dampness in the materials is very likely to produce heaviness in the cake. It is always best to have each ingredient properly prepared before beginning to mix the cake.

Currants should be put into a colander and cold water poured over them two or three times, then spread upon a dish and carefully looked over, so that any little pieces of stone or stalk may be removed. The dish should then be placed before the fire, and the currants turned over frequently until they are quite dry.

Butter should be laid in cold water before it

is used, and, if salt, should be washed in several waters. It should be beaten with the hand in a bowl till it is reduced to a cream, pouring off the water until no more is left.

Flour.—The flour for cakes should be of the best quality. It should be weighed after it is sifted and dried.

Eggs.—Each egg should always be broken into a cup before it is put to the others, as this will prevent a bad one spoiling the rest. The yolks and whites should be separated, the specks removed, and then all the yolks transferred to one bowl and the whites to another. The yolks may be beaten with a fork till they are light and frothy, but the whites must be whisked till they are one solid froth, and no liquor remains at the bottom of the bowl. The eggs should be put in a cool place till required for use. When the whites only are to be used, the yolks, if unbroken, and kept covered, will keep good for three or four days.

Sugar.—Loaf sugar is the best to use for cakes; it should be pounded and sifted.

Lemon.—Peel should be cut very thin, as the white, or inner, side will impart a bitter flavor to the cakes.

Almonds for cakes should be blanched by being put into boiling water, and when they have been in for a few minutes the skin should be

taken off and the almonds thrown into cold water to preserve the color. If they are pounded, a few drops of water, rose-water, or white of egg should be added in every two or three minutes, to prevent them oiling. If they are not pounded, they should be cut into thin slices or divided lengthwise.

LESSON RECIPES FOR CAKES

PLAIN CAKE

1 heaping tablespoonful butter; ½ cup fine sugar; 1 egg; ¼ cup milk; 1 even teaspoonful baking powder; ¾ cup flour; ⅛ teaspoonful spice, or ¼ teaspoonful flavoring.

Make ready the fire and oven, and line the pans with buttered paper. Cream the butter, and work in the sugar gradually. Separate the egg, beat the yolk, pour the milk into it, and add it to the creamed butter. Sift in the flour, baking-powder, and spice, and stir it well, to make a smooth dough. Beat the white until stiff, and fold it lightly into the dough. Bake from twenty to thirty-five minutes. Try with a clean straw or a fine skewer. When done, take it from the pan, let it stand a few minutes, and carefully peel off the paper. When cool, it may be frosted. English currants, raisins quartered and seeded, or citron cut in thin

slices, may be rolled in flour, and added to the cake just before baking. Chopped nuts may be stirred in to make a nut cake. A little cocoa may be stirred into part of the dough to make it dark. Spread half of the light cake in the pan, then scatter in the dark and add the remainder of the light.

The following recipe resembles the plain cake given above, the ingredients being in larger quantities:

LIGHT CAKE

1 cupful butter; 1½ cupfuls sugar; 3 eggs, separated; 1 teaspoonful flavoring; ½ cupful milk; 3 cupfuls flour; 2 teaspoonfuls baking-powder, or 1 teaspoonful cream tartar, and ½ teaspoonful soda.

Follow the directions for mixing as given in the plain cake. Do not put in one-quarter cupful of the flour, but save it to see if the dough is too stiff. If the cake is baked in shallow pans, or in a gem-pan, less flour will be needed than for a thick loaf. One cupful currants may be added, or 1 cupful nuts; ½ cupful dates may be floured and added to make a date cake. It may be baked in round, shallow pans, and the cakes put together with jelly between.

SPONGE CAKE

1½ cupfuls flour; 2 teaspoonfuls baking-powder; 1 cupful sugar; 1 teaspoonful flavoring; 2 eggs; milk or cream.

Sift the flour, baking-powder, and sugar together. Break the eggs into a cup, fill the cup with milk or cream, pour the mixture into a bowl, beat it slightly, and add it gradually to the flour. Put in the flavoring, and beat the whole mixture with an egg-beater for five minutes. Bake from twenty to thirty minutes in a moderate oven.

It may be baked in an oblong, shallow pan; when done turn it out, spread jelly or jam over it, and roll it up to make a jelly-roll. If baked in round, shallow pans, it can be made into a layer cake, with jelly, whipped cream, fruit, cocoanut, or melted sweet chocolate between the layers.

MOLASSES CAKE

⅔ cupful sugar; ⅔ cupful butter; ⅔ cupful molasses; 1 egg; 1 cupful milk; 2½ cupfuls flour; 1 even teaspoonful cream tartar; 1 heaping teaspoonful soda; 1 even tablespoonful mixed spice; 1 tablespoonful vinegar, or lemon juice.

Cream the butter, add the sugar gradually, and stir in the molasses. Sift in ½ cupful of

the flour. Beat the egg, mix it with the milk. Mix the cream tartar, soda, and spice with the flour, and add the flour and the milk alternately, stirring well to make a smooth dough. Stir in the vinegar or lemon juice and bake at once in gem-pans or in two shallow pans or in a loaf-pan. By adding ½ cupful raisins, seeded and quartered, ½ cupful currants, and ¼ cupful citron sliced, and all the fruit rubbed with flour, a good fruit cake may be made. By substituting 1 tablespoonful ginger for the mixed spice, a good gingerbread may be made.

BOILED FROSTING

1 cupful granulated sugar; ½ cupful milk; 2 tablespoonfuls cocoa, or 1 even teaspoonful butter.

Stir together, and boil, *without* stirring, four minutes. Remove from the fire and beat with an egg-beater until it begins to thicken; then spread it at once over cold cake. This makes a creamy frosting, which does not dry and crumble, but stays on the cake. If it does not thicken readily when beaten, boil it for two or three minutes again.

If desired, the frosting may be made, beaten until thick and sugary, and set away. When wanted for use, the pan containing it may be set into boiling water, and the mixture may be

melted so that it can be spread on the cake. If flavoring is desired, ¼ teaspoonful vanilla or lemon may be added, with or without the cocoa.

EGG FROSTING

Beat the white of an egg, and beat into it, gradually, enough powdered sugar to make a soft dough. Add ¼ teaspoonful lemon extract, or 1 teaspoonful lemon or orange juice, or ¼ teaspoonful vanilla, and spread it on the cake.

If desired, 2 tablespoonfuls melted chocolate, or 2 tablespoonfuls desiccated cocoanut may be mixed with it. The yolk of the egg may be used instead of the white to make *Sunshine Frosting.*

PLAIN FROSTING

1 cupful pulverized sugar; 1 tablespoonful lemon or orange juice; 3 tablespoonfuls or more of boiling milk or water.

Mix the sugar and fruit-juice, and stir in the boiling liquid, adding enough to make a soft dough. Spread it over the cake. This frosting may be varied by adding different ingredients as directed in the other recipes.

LESSON XXXI

PRESERVES

Home-made jam is both a convenience and a luxury. When well and carefully made it is not only superior to that which is usually offered for sale, but very much more economical also, and no store-closet can be said to be well filled which does not boast a goodly show of neatly labelled jars of preserves. In making jam, the first thing to be looked after is the fruit. As a general rule, this should be fully ripe, fresh, sound, scrupulously clean and dry. It should be gathered in the morning of a sunny day, as it will then possess its finest flavor. The best sugar is the cheapest; indeed, there is no economy in stinting the sugar, either as to quality or necessary quantity, for inferior sugar is wasted in scum, and the jam will not keep unless a sufficient proportion of sugar is boiled with the fruit. At the same time too large a proportion of sugar will destroy the natural flavor of the fruit, and in all probability make the jam candy. The sugar should be dried and broken up into small pieces before it is mixed with the fruit.

If it is left in large lumps it will be a long time in dissolving, and if it is crushed to powder it will make the jam look thick instead of clear and bright. The quantity to be used must depend in every instance on the nature of the fruit, and will be found in the several recipes throughout this work. Fruit is generally boiled in a brass or copper pan, uncovered, and this should be kept perfectly bright and clean. Great care should be taken not to place the pan flat upon the fire, as this will be likely to make the jam burn to the bottom of the pan. If it cannot be placed upon a stove-plate, it should be hung a little distance above the fire. Glass jars are much the best for jam, as through them the condition of the fruit can be observed. Whatever jars are used, however, the jam should be examined every three weeks for the first two months, and if there are any signs of either mould or fermentation, it should be boiled over again. The best way to cover jam is to lay a piece of paper the size of the jar upon the jam, to stretch over the top a piece of writing-paper or tissue paper which has been dipped in white of egg, and to press the sides closely down. When dry, this paper will be stiff and tight like a drum. The strict economist may use gum dissolved in water instead of white of egg. The object aimed at is to exclude the air entirely. Jam

should be stored in a cool, dry place, but not in one into which fresh air never enters. Damp has a tendency to make the fruit go mouldy, and heat to make it ferment. Some cooks cover the jam as soon as possible after it is poured out, but the generally approved plan is to let the fruit grow cold before covering it. In making jam, continual watchfulness is required, as the result of five minutes' inattention may be loss and disappointment. There are other ways of preserving fruit besides making it into jam, such as drying, bottling, and candying. The recipes for jams and these other processes will be given in their proper places.

LESSON XXXII

NUTS

Nuts are the fruits of trees and shrubs which have the seed inclosed in a bony or woody covering, not opening when ripe. Some kinds are dupraceous, something between a stone fruit and a nut.

These fruits form the principal articles of food to many people in different countries. They are very palatable, full of nutrition, and easily digested. They form the milk, meat, and butter of the vegetarians, who are increasing in numbers every year in this country. We have generally overlooked the nut as a principal article of diet, contenting ourselves with serving them after dessert. They should, however, not be eaten at this stage of a dinner, for they contain the same ingredients as the dinner which has gone before, in concentrated form, and the generally resulting uncomfortable feeling that you experience under such conditions is really due to the fact that, whether you know it or not, you have eaten two dinners or the best part of two.

Like all foods nuts are divided into classes, and like other articles of diet they are nitrogenous and carbonaceous.

Among those containing nitrogenous matter are the peanut, pecan, English walnut, almonds, and hickory nuts. Black-walnuts and cocoanuts are in the other class, rich in oil. Some kinds, such as the chestnut, should always be cooked when used as food, on account of the starch they contain. The almonds and peanuts, which are used all over the world, contain all the necessary elements for building up the tissues of the body, and enter largely into modern methods of cooking, the principal uses being salted almonds, almond butter, etc.

The recipes in which nuts are used will be found under the regular heading as arranged in the alphabetical index.

LESSON XXXIII

DESSERTS

Unlike the Englishman, who confines the word dessert to fruits and nuts, and would call what we talk about here "sweets" pure and simple, we Americans make the term embrace everything that is served at the close of the meal, and this idea has become so firmly fixed that even Webster defines the word as—"A service of pastry, fruit, or sweetmeats at the close of an entertainment; the last course at the table after meat." We shall not, however, class pastry in this division of the art of cookery. Not because it does not come within the definition of the term as given by Webster's Dictionary, but because it ought to stand alone in a division by itself, covering the idea that it would be good for the health of America if more of us left it alone.

There is not much to say about the subject of desserts in general. There are hardly any general rules to be laid down in making the class of "sweets" in this division. They are individ-

ual dishes, and must be made according to the individual recipes.

The average American girl, when she comes to face the fact that she doesn't know how to broil, boil, or bake meat, bread, or vegetables, omits the fact that she knows something about making "sweets," for it is the province of every girl to know about them, and she at least may consider herself no cook, even if she is well up on "sweets." For the benefit of those, however, if any, who know not the how and when of such little delicacies as ice creams, ices, and short cakes, refer to the alphabetical index for a very comprehensive list of recipes in this division which are many of them suited to the beginner, easily made, and will enable to bring forth a new one every day.

LESSON XXXIV

COOKERY FOR INVALIDS

LIQUID FOODS

Food for invalids should be in such a form that it can be easily digested. All food is changed into a liquid, before it can be carried about by the blood, to build up the worn-out tissues. Food that is in a liquid form is, therefore, quickly digested with the least possible work to the body.

Drinks made from fruit-juices contain some mineral matter and acids which are wholesome for the blood. Used cold, they refresh the body and sometimes help to create an appetite for more nourishing food; used hot, they help to induce perspiration, which often assists in breaking up an attack of illness.

Jellies are other preparations of fruit-juices, and are classed as liquid food, since they melt in the mouth. Some jellies are hardened by the gummy *pectine* in the fruit-juice, and others by gelatine, which is prepared from bones and animal tissues.

GRUELS

Gruels are semi-liquid preparations of grains. They contain the nourishing properties of the grains without the bran or solid parts. Their advantages are that they are rapidly and easily digested.

They should be well stirred and boiled to cook every starch-grain and to soften the gluten.

TEA

Tea consists of the leaves and small stems of a plant growing in China, Japan, and other countries. Green tea is dried quickly, therefore it keeps its color. Tea, being stimulating in its effects, is not a wholesome drink for young people.

The leaves contain tannin, which, if taken into the stomach in any quantity, will, in time, harden the lining membrane. Boiling the leaves in water draws out the tannin, therefore *tea should never be boiled,* but steeped about five minutes.

The tannin or tannic acid acts on tin, producing a poison.

COFFEE

Coffee is a native of warm countries. It is prepared from the seed of a fruit which resembles a cherry. It is a stimulant and contains

tannin. Coffee is sometimes boiled, but is more wholesome if filtered.

BEEF-TEA

Broth or beef-tea is a way of cooking meat by which all the juice is drawn out. It is cooked in a double boiler, that it may not boil and harden the albumen, making it indigestible. It is strained through a coarse strainer so that the brown sediment, which is the albumen, may be used with the juice. It should have no fat. If any rises on the top of the tea, wipe it off by passing soft, clean paper over the surface of the liquid.

MILK AS FOOD FOR INVALIDS

Milk is a wholesome liquid food for invalids. It is varied by serving in many ways. It contains all the substances which are necessary for the body in the proper proportions.

Ice cream is a pleasant form of milk food. It is frozen by using ice or snow and rock-salt. Salt gathers moisture. When it is mixed with ice it gathers moisture from the ice, thus causing it to melt. The ice in melting absorbs heat from the cream, thus causing the cream to freeze. The ice will not melt with sufficient rapidity to freeze the cream without the assistance of the salt.

TOAST

Toasted bread is wholesome if it is thoroughly dried over the fire and browned.

If starch is mixed with water and heated to a high degree, it changes to a gummy substance called dextrin, which is digestible. In a slice of bread, part of the starch is changed to dextrin, and in toasting, if it is well dried and browned, the starch is largely changed. When the bread is browned, the dextrin changes to a starch-sugar, called dextrose, which is readily absorbed by the body. If toast is dry, and is masticated thoroughly, the saliva helps to digest the dextrin.

LEMON JELLY

¼ box gelatine; ¼ cupful cold water; 1 cupful boiling water; 1 cupful sugar; 1½ lemon, rind and juice.

Soak the gelatine in the cold water twenty minutes. Pour on the boiling water, and stir until the gelatine is dissolved. Add the sugar, the juice of the lemon, and the thin, yellow rind. Stir until the sugar is dissolved, and strain through a piece of clean cheesecloth, into a cold, wet mould. Set in a cold place to harden. If put in a very cold place, it will harden in one hour. If it can be allowed to harden four or

five hours, or overnight, the recipe may be doubled, with the exception of the gelatine and cold water, so that twice as much jelly, of a softer consistency, may be made from the same amount of gelatine.

By substituting for the lemon, 1 orange, ¼ cup currant juice, or ¼ cup juice of apricots, different jellies may be made from this recipe. If the jelly does not stiffen, soak two tablespoonfuls more of gelatine in 2 tablespoonfuls cold water, heat the jelly until it begins to boil, stir it into the soaked gelatine, and cool. Try the experiment again if it does not succeed the first time.

IRISH-MOSS JELLY

¼ cup Irish Moss; 2 figs; 1 cup boiling water; 1 lemon and orange; ⅓ cup sugar.

Soak, pick over, and wash the moss. Cut the figs in small pieces, pare a thin rind from the lemon or orange. Place the moss, figs, and rind in a saucepan, pour on the boiling water, and boil, stirring constantly for ten or fifteen minutes, until the liquid thickens. Add the sugar and fruit-juice, stir until the sugar is dissolved, and press the mixture through a fine wire strainer into a cold, wet mould. Set in cold water. As soon as it becomes cold it will harden.

LEMONADE

1 lemon; 2 tablespoonfuls sugar; 1 cup boiling water.

Pour the boiling water into a bowl and cover it. Squeeze the lemon and add the juice and the sugar to the water. Cover and set away to cool. When desired for use strain, add sugar if wished, dilute with cold water or small pieces of ice. This may be served as a hot drink when first prepared. If sugar is added to suit the taste, and the mixture is frozen, it makes a good sherbet or water-ice. Cold water may be used instead of the boiling water.

APPLE WATER

1 apple; 1 tablespoonful sugar; 1 strip lemon-peel; 1 cup boiling water.

Wipe a large, sour apple—a red one is best—and, without paring, cut it into thin slices. Put them into a bowl, add the lemon-peel, sugar, and boiling water. Cover, and set away to cool. Strain, and serve with small pieces of ice floating in it.

RHUBARB WATER

1 small stalk rhubarb; 1 strip lemon-peel; 1 tablespoonful sugar; 1 cupful boiling water.

Wash the rhubarb, cut in half-inch lengths. Put into a bowl, add the peel, sugar, and boiling

water. Cover and set away to cool. Strain, and serve cold. The peel may be omitted.

OATMEAL GRUEL

1 tablespoonful rolled oats; 1 cup boiling water; ¼ teaspoonful salt.

Pick over the oatmeal. Put it into a saucepan, pour on the boiling water, add the salt, and boil, stirring often, fifteen or twenty minutes or longer. If it becomes very thick, add a little boiling water, boil it up again, and when desired to serve, strain it quickly into a warm bowl, cover, and serve with sugar and milk on the tray.

WHEATENA GRUEL

1 cupful boiling water; 2 tablespoonfuls wheatena; ¼ teaspoonful salt.

Put the water and salt in a saucepan, and when boiling stir in the wheatena. Boil, and stir well ten or twenty minutes or longer. Then, if necessary, as directed in the recipe above, strain into a hot bowl or cup, and serve in the same way as oatmeal gruel.

MILK PORRIDGE

1 tablespoonful boiling water; 1 cupful milk; ⅛ teaspoonful salt; ½ tablespoonful flour.

Put the boiling water in an uncovered pan. Add the milk and salt. Mix the flour to a

smooth paste with a little cold milk, and when the milk boils stir in the flour paste and boil five minutes, stirring constantly. Strain into a cup and serve. The porridge may be varied by adding ½ teaspoonful butter when the porridge is ready to strain.

TEA

1 even teaspoonful tea; 1 cupful freshly boiling water.

Heat a china teapot by pouring boiling water into it. Let it stand a moment, pour out the water, put in the tea, add the freshly boiling water, and let the tea stand on the table, covered, to steep five minutes. Never boil tea. Cover it, while steeping, with a towel or tea-cosey, to keep it hot.

HOW TO PREPARE AN ORANGE FOR AN INVALID

Take a firm, juicy orange, and, with a sharp knife, take off a thick paring, cutting through to the pulp. Cut out each section of pulp, being careful not to take any of the membranes, remove the seeds, and lay the sections on a pretty saucer. Sprinkle fine sugar over them, and small pieces of ice.

TOAST

Cut stale bread in slices quarter-inch thick, or in strips one inch wide. Lay the pieces in a wire

toaster, and hold them at a little distance from the fire, turning them often so as to dry them well. When dry, hold them nearer the fire, and toast both sides until golden-brown.

WATER-TOAST

Place a pan, containing 1 pint boiling water and ½ teaspoonful salt, on the stove. Prepare slices of toast as above, dip them quickly in the boiling water, lay them on a hot dish, spread with butter, and serve hot.

MILK-TOAST

½ tablespoonful butter; ½ tablespoonful corn starch, or ¾ tablespoonful flour; 1 cup milk, scalded; ½ teaspoonful salt.

Melt the butter in a saucepan, add the dry corn starch or flour, stir well, and cook three minutes. Add part of the milk, boil, and stir to make the mixture smooth, add more milk and stir constantly. When all the milk is added, boil once, and put in the salt. Pour this sauce between each slice of toast and over the whole. Serve in a hot dish. If the toast is preferred soft, dip the slices in boiling salted water, before adding the sauce.

ICE CREAM

1 cupful cream or milk; 4 teaspoonfuls sugar; 1 even tablespoonful melted chocolate, or 1

tablespoonful strawberries, or ¼ teaspoonful lemon extract.

Mix the sugar and cream. Melt the chocolate, and add a little of the cream to it, so that it will be thin enough to pour into the remainder of the cream. Put the mixture into a pail with a tight cover, and set this inside a larger pail or pan. Beat the cream, with an egg-beater, until foamy. Fill the space between with pounded ice and rock-salt, using 3 cupfuls ice to 1 cupful salt. Turn the small pail back and forth. Open it occasionally, being careful that no salt falls in, and scrape the cream from the sides. Cover and turn again, and repeat this process until the cream is hard. It will freeze, usually, in twenty minutes.

If strawberries are used, instead of chocolate, crush them, before adding them to the cream. If the cream is not intended for a sick person, it may be flavored with ¼ teaspoon vanilla. Water-ices and soft custard may be frozen in a pail in the same manner.

EGGNOGG OR GRUEL

1 egg; 1 tablespoonful sugar; ½ cupful milk; sprinkle salt; sprinkle nutmeg.

Beat the yolk of the egg, add the sugar and mix. Scald the milk with the salt and nutmeg. Beat the white until slightly foamy, but not

stiff. Stir the milk into the yolks, and beat in the white lightly. Serve in a pretty cup. If the eggnogg is preferred cold, the milk need not be scalded.

STEAMED CUSTARD

1 egg; 1 tablespoonful sugar; 1 cupful milk; sprinkle salt; sprinkle nutmeg.

Beat the egg slightly, add the other ingredients. Fill cups three-quarters full of the mixture, stand them in a steamer over boiling water, and steam from ten to twenty minutes, until firm. Watch the custard closely to see that it does not cook too long, so that it looks like curds and whey.

BEEF-JUICE

Scrape ½ pound lean, juicy beef to a fine pulp. Put into a double boiler, with cold water in the lower part, and heat gradually, keeping it simmering one hour, or until the meat is white. Strain and press out the juice, season with salt to taste, and serve hot.

BEEF-TEA

Shred ½ pound lean, juicy beef, and place in a double boiler with 1 cup cold water and ½ teaspoonful salt. Let it stand from one-half to 1 hour, then put boiling water in the lower part of the boiler, and cook five or ten minutes, until

the juice looks brown. Strain, and serve the juice hot, in a pretty cup.

IRISH-MOSS BLANCMANGE

¼ cup Irish moss; 1 pint milk; ⅛ teaspoonful salt; 1 tablespoonful sugar; sprinkle nutmeg, or 1 inch lemon-rind.

Soak, pick over, and wash the moss. Put it, with the milk, salt, and nutmeg, into the top of the double boiler. Cook from fifteen to thirty minutes, until it thickens, and will harden, if a little is dropped on a cold plate. Strain into a cold, wet mould, and set away to cool and harden. Serve with sugar, and milk, or cream.

CORN-STARCH BLANCMANGE

2 cups milk; 3 tablespoonfuls sugar; 4 even tablespoonfuls corn starch, 2 sprinkles salt; 2 tablespoonfuls chocolate melted, or 2 tablespoonfuls strawberries.

Scald the milk in a double boiler. Add the sugar and salt, the chocolate, or the fresh, mashed strawberries, or preserved berries. Mix the corn starch with a little cold milk, stir it into the hot milk, and boil and stir it five or ten minutes, until it is smooth and thick. Pour the mixture into cold, wet cups or moulds. Serve cold, with sugar and milk, or cream.

COLD CUSTARD, OR JUNKET

1 quart new sweet milk; 1 tablespoonful sugar; 1 tablespoonful liquid rennet.

Warm the milk a little, then stir in the sugar and rennet, and pour the mixture into a glass or china dish and set it where it will keep a little warm. If, at the end of an hour, it has not begun to harden, stir in 1 teaspoonful rennet; it should be firm in one or two hours. Set on ice to become cold. Sprinkle with sugar and cinnamon and serve with cream. It should be eaten within an hour after it has hardened, or it will separate into curds and whey.

LESSON XXXV

MISCELLANEOUS INFORMATION

MEASURES

Cup.—A common coffee-cup is the standard. A cup of liquids is half a pint. A cupful of butter, packed solid, is 7½ ounces. A cupful of corn meal is 5 ounces. A cupful of stemmed currants, heaped up, is 6 ounces. A level cupful of flour is 4 ounces; 4 cups make 1 pound or quart. A cupful of lard is 8 ounces; 2 cupfuls of lard are 1 pound or quart. A cupful of milk is 8 ounces. A cupful of molasses is 12 ounces. A cupful of oatmeal, level, is 6 ounces. A cupful of stemmed raisins is 8 ounces, or ½ pound. A cupful of granulated sugar, level, is 7 ounces. A rounded cupful is ½ pound. A cupful of brown sugar, level, is 6 ounces. A cupful of water is 8 ounces. Four level cupfuls of flour are 1 pound or 1 quart. 2 cupfuls of butter, packed solid, are 1 pound. ½ cupful of butter is ¼ pound. 3 cupfuls of corn meal are 1 pound. 2½ cupfuls of powdered sugar are 1 pound. 2 cupfuls of granulated sugar are 1 pound. 2 cups are 1 pint. 4 cups are 1 quart. 1 cup is equal to 4 wineglassfuls.

Tablespoon.—14 full tablespoonfuls of liquid make 1 cup, or ½ pint. 1 tablespoonful of dry material is 3 teaspoonfuls. 4 tablespoonfuls are 1 wineglassful. 8 heaping tablespoonfuls of solids are 1 cupful. 2 rounded tablespoonfuls of flour are 1 ounce. 1 heaping tablespoonful of the spices make 1 ounce. 2 tablespoonfuls of liquid make 1 ounce. 2 rounded tablespoonfuls of coffee make 1 ounce. 2 rounded tablespoonfuls of sugar make 1 ounce. 1 large tablespoonful of butter is 2 ounces.

Teaspoonful.—3 teaspoonfuls of solids make 1 tablespoonful. 4 teaspoonfuls of liquids are 1 tablespoonful. 1 heaping teaspoonful of spice is ¼ ounce. 2 rounded teaspoonfuls of mustard are ¼ ounce. 1 teaspoonful of soda is ¼ ounce. 1 teaspoonful of salt is ¼ ounce. 1 teaspoonful of pepper is ¼ ounce. 3 level teaspoonfuls of tea are ¼ ounce. 1 teaspoonful of liquid is ¼ ounce. 1 teaspoonful of liquid is 30 drops.

4 cups of liquid make 1 quart. 2½ cups powdered sugar 1 pound, or 1 quart. 1 pint of milk or water 1 pound. 1 pint of chopped meats 1 pound. 9 large or 10 medium eggs 1 pound. 1 round tablespoonful of butter 1 ounce. 1 piece butter size of egg 1 ounce. 1 flask of olive oil 1¾ cups, or 20 tablespoonfuls. 1 small flask of Foss' Extract 12 teaspoonfuls. 1 small flask of Foss' Extract ¼ cup, or scant 3 table-

spoonfuls. 1 flask of brandy 1½ cup, or 24 tablespoonfuls. 1 flask of S. M. Wine 3 cups, or 48 spoonfuls.

TABLE OF AVERAGE COST OF MATERIAL USED IN COOKING

2 teaspoonfuls of tea	.01
1 teaspoonful of vanilla	.02
1 teaspoonful of spice	.02
1 teaspoonful of soda, and 2 teaspoonfuls of cream-tartar	.02
1 tablespoonful of butter	.03
1 tablespoonful of wine	.02
1 tablespoonful of brandy	.04
1 tablespoonful of olive oil	.02
2 tablespoonfuls of coffee	.05
Butter size of an egg	.05
1 orange	.03
1 egg	.03
1 lemon	.02
1 cup of flour or meal	.01
1 cup of sugar	.03
1 cup of butter	.15 to .20
1 cup of molasses	.05
1 cup of milk	.02
1 quart of milkman's cream	.25
1 quart of Deerfoot or heavy cream	.60
1 box gelatine	.16
1 pound of raisins	.18
1 pound of currants	.10
1 pound of citron	.18
1 pound of crackers	.10
1 pound of tapioca	.07
1 pound of rice	.09
1 pound of macaroni	.18
1 pound of spaghetti	.16
1 pound of corn starch	.10

1 pound of tea	.75
1 pound of coffee	.38
1 pound of chocolate	.40
½ pound of nutmeg	.32
½ pound of mace	.60
½ pound of cloves, cassia	.15
½ pound of ginger	.10
½ pound of mustard	.12
½ pound of herbs, ground	.10
1 tumbler jelly	.35
1 jar marmalade	.25
Package of whole herbs	.08
1 pound of cheese	.18
1 pound of Parmesan cheese	.50
1 peck of potatoes	.25
1 peck of apples	.50
1 quart of onions	.10
1 carrot	.02
1 turnip	.05
1 bunch of celery	.20
1 handful of parsley	.05
1 bunch of watercress	.05
1 head of lettuce	.10
1 can of tomatoes	.15
1 can of salmon	.18
1 can of lobster	.15
1 can of devilled ham and tongue	.30

TIME TABLE FOR COOKING

BAKING

Baking Bread, Cake, Puddings, Meats, etc.

Loaf Bread	40 to 60 minutes
Rolls, Biscuit	10 to 20 minutes
Graham Gems	30 minutes
Gingerbread	20 to 30 minutes
Sponge Cake	45 to 60 minutes
Plain Cake	30 to 40 minutes
Fruit Cake	2 to 3 hours

Cookies	10 to 15 minutes
Bread Pudding	1 hour
Rice and Tapioca Pudding	1 hour
Indian Pudding	2 to 3 hours
Plum Pudding	2 to 3 hours
Custards	15 to 20 minutes
Steamed Brown Bread	3 hours
Steamed Puddings	1 to 3 hours
Pie Crust	about 30 minutes
Potatoes	30 to 45 minutes
Baked Beans	6 to 8 hours
Braised Meat	3 to 4 hours
Scalloped Dishes	15 to 20 minutes
Beef, Sirloin, rare, per lb.	8 to 10 minutes
Beef, Sirloin, well done, per lb.	12 to 15 minutes
Beef, rolled Rib or Rump	12 to 15 minutes
Beef, long or short Fillet	20 to 30 minutes
Mutton, rare, per lb.	10 minutes
Mutton, well done, per lb.	15 minutes
Lamb, well done, per lb.	15 minutes
Veal, well done, per lb.	20 minutes
Pork, well done, per lb.	30 minutes
Turkey, 10 lbs. weight	3 hours
Chicken, 3 to 4 lbs.	1 to 1½ hours
Goose, 8 lbs.	2 hours
Tame Duck	40 to 60 minutes
Game Duck	30 to 45 minutes
Grouse	30 minutes
Pigeons	30 minutes
Small Birds	15 to 20 minutes
Venison, per lb.	15 minutes
Fish, 6 to 8 lbs., long thin fish	1 hour
Fish, 4 to 6 lbs, thick Halibut	1 hour
Fish, small	20 to 30 minutes

FRYING

Croquettes, Fish-Balls	1 minute
Doughnuts, Fritters	3 to 5 minutes

Bacon, small Fish, Potatoes	2 to 5 minutes
Breaded Chops and Fish	5 to 8 minutes

BROILING

Steak, 1 inch thick	4 minutes
Steak, 1½ inches thick	6 minutes
Small, thin fish	5 to 8 minutes
Thick fish	12 to 15 minutes
Chops, broiled in paper	8 to 10 minutes
Chicken	20 minutes
Liver, Tripe, Bacon	3 to 8 minutes

BOILING

Water, 1 quart, over gas, covered	5 minutes
Water, 1 quart, over gas, uncovered	4 minutes
Coffee	3 to 5 minutes
Tea, steep without boiling	5 minutes
Corn meal	3 hours
Hominy, fine	1 hour
Oatmeal, coarse, steamed	3 hours
Oatmeal, rolled	30 minutes
Rice, steamed	45 to 60 minutes
Rice, boiled	15 to 20 minutes
Wheat Granules	20 to 30 minutes
Eggs, soft-boiled	3 to 6 minutes
Eggs, hard-boiled	15 to 20 minutes
Eggs, coddled	6 to 8 minutes
Fish, long, whole, per lb.	6 to 10 minutes
Fish, cubical, per lb.	15 minutes
Clams, Oysters	3 to 5 minutes
Beef, corned or à la mode	3 to 5 hours
Soup Stock	3 to 6 hours
Veal, Mutton	2 to 3 hours
Tongue	3 to 4 hours
Potted Pigeon	2 hours
Ham	5 hours
Sweetbreads	20 to 30 minutes
Sweet Corn	5 to 8 minutes
Asparagus, Tomatoes, Peas	15 to 20 minutes

Macaroni, Potatoes, Spinach	20 to 30 minutes
Squash, Celery, Cauliflower	20 to 30 minutes
Sprouts, Greens	20 to 30 minutes
Cabbage, Beets, young	30 to 45 minutes
Parsnips, Turnips	30 to 45 minutes
Carrots, Onions, Salsify	30 to 60 minutes
Beans, string and shell	1 to 2 hours
Brown Bread	3 hours
Puddings, 1 quart, steamed	3 hours
Puddings, small	1 hour
Freezing Ice Cream	30 minutes

COMBINATIONS

With oysters and clams, which must always be served in their own shells, very cold, and on ice: a quarter of lemon, horseradish, Tabasco, oyster crackers.

With consommé or clam soup: bread sticks, or crispettas.

With chowders: pilot or water biscuit.

With macaroni: grated Parmesan, and some clam soup.

With prunes or cream soup: toasted sippets or croutons.

With broiled fish: lemon, drawn butter, and parsley.

With fried fish: potatoes Parisienne, boiled or creamed potatoes, tartare sauce, lemon, parsley, and potatoes fried in various ways.

With baked fish: lemon, parsley, and the accompanying gravy.

Boiled fish: egg sauce or Hollandaise, boiled potatoes. With all fish it is customary to serve hot, crisp rolls.

Salad with fish: Cucumber salad, with French dressing, served with any fish, is a palatable accompaniment.

With raw oysters or clams: cabbage, salad with French dressing.

With lobster: lettuce salad, French dressing. Among side dishes, placed on the table before guests are seated, are celery stalks, sweet pickle, gherkins, or olives.

With entrées: Entrées are nearly always served with the appropriate sauce; peas, mushrooms, truffles, and crisp bread being an accompaniment.

Roasts: With roasts serve potatoes and one or more green vegetables selected from the following: peas, cauliflower, string beans, young carrot, lima beans, brussels sprouts, beets, hot asparagus, corn, parsnips, egg plant, turnip, spinach, cabbage, baked or scalloped tomatoes, kale. Potatoes, boiled, baked, pan-browned, mashed, fried, afford a selection, and frequently baked squash, Yorkshire pudding, corn meal, or hominy croquettes take the place of potatoes.

With boiled beef or pot roast: boiled potatoes, baked squash, boiled turnip, carrots, or cabbage.

With game: Serve bread, an appropriate sauce, and currant jelly.

When game is served, salad with French or mayonnaise dressing usually accompanies it. Otherwise the salad takes the place of game and is served separately after the roast, as a course. When a dinner of the most formal kind is given, frozen punch or some ice is served also with the game.

After the salad the table is cleared and dessert, when it is a frozen one, is accompanied by *petits fours* or small cakes, then the cheese, which is a matter of selection, and toasted crackers; the demi-tasse of strong black coffee being served with the cheese course.

Fruit, nuts, raisins, are frequently served at the same time as the coffee.

The garnishing is purely a matter of individual taste, and likewise a display of the artistic ability which, in all cases, varies. It is a wise precaution to endeavor to please the eye as well as the taste. Lemon, parsley, watercress, potato puff or croquette, rice farina made into squares or puffs, also pastry, form a combination to select from.

HOME CHAT I

THE HEAD OF THE HOUSE; WHICH IS IT?

Husband or wife—which is head of the house; supreme authority in affairs domestic? Well, we know the proverb, that the really clever one is he or she who can have things their own way, while outwardly seeming to acknowledge the authority of the other. There are husbands who congratulate themselves in private on their complete control of the rudder of the family ship. There are wives who frankly concede masculine predominance in the partnership. Yet the self-satisfied spouse is often dwelling in a mental "fools' paradise"; while his better half does the governing almost without his knowing it; and, on the other hand, we could name a good many scores of wives who, in spite of their seeming submission to marital authority, still contrive to "boss" the situation most effectively.

An English domestic doggerel, supposed to be written by a very diplomatic wife, takes a terse turn in one of its verses, concluding thus:

> "Serene, he thinks *he* rules the nest;
> But I know better—that's the test;
> *I* rule as hostess, *he* as guest."

That would seem to be an ideal arrangement, from the standpoint of domestic or marital felicity: The husband is quite happy, convinced of his exercise of autocratic authority; the wife disputes nothing, soothing him by her amiable deference, and all the time wielding the practical sceptre of the home kingdom.

In one way it is fair enough that the money-winner should wield the authority. He has to find the means; it is equitable that he should insist upon its wise and profitable disbursement. Certainly he can fairly claim to be given a satisfactory return in the form of board and lodging. Provided he does provide adequately, none can blame him if he protests against inferior culinary results, uneatable meals, or extravagance in whatever direction; none can deny his claim to the privilege of pointedly objecting to obvious mismanagement, or demanding needed reform. Yet he is also bound to recognize his wife's authority in her own domain, and to acknowledge her status as the natural director of the housekeeping department. Marriage is largely a business agreement; she has her side of the contract to keep, as he has his. Each is properly a distinct branch of administration.

He should not forget that she is his business associate, not in the least an employé.

A true recognition of that important fact will do much to prevent misunderstandings and bickerings in wedded life: admitted equality in the contract is the source of peace, the prime eliminator of strife.

The competent wife—even she who is fairly competent—is worthy of her hire. And that hire she should ungrudgingly be given, even if it amounts to nothing more than just appreciation of her merit. If her husband lowers himself so far as to supervise and personally interfere in her own special province, inspecting her ways of working, it becomes a question whether, in thus seeking to humiliate his wife by placing her on a par with an unreliable servant, he does not at the same time himself incur the disgrace of being called a "milksop," or having similarly appropriate epithets applied to him. For that is what he lays himself open to.

How men can lose caste by this sort of mean intermeddling is shown by remarks one sometimes overhears. Even other men do not respect him. For instance, let me tell this little incident. It was a conversation between two men anent a mutual acquaintance.

"My wife says that V. employs an expert accountant to audit Mrs. V.'s housekeeping bills."

" Yes," said the other, " I can quite credit it. His wife's sister told my wife that he ' takes stock ' regularly of all the domestic stores and checks them off with the bills of the butcher, baker, and candlestick maker."

That is a good case in point. He had become an object of contempt and ridicule even to his own sex.

No woman wants to have a husband who makes an amateur housewife of himself. She does not want to have to admit that he is that sort of man, even to herself; and suppose she is goaded into confiding to her feminine friends over the shortcomings of her husband,—no matter how unwise such a course may be,—she would hate to hear him canvassed by others in the way I have mentioned. Let him, indeed, commit faults of temper, and even be sometimes something of a " bear "; she can make allowance for his churlishness by reflecting that he has business worries of which he never openly speaks, yet which he may involuntarily vent upon her in such moments of irritation; but the one thing she cannot, and can scarcely be expected to, forgive, is any tendency to invade the precincts of those housekeeping preserves which acknowledge her as sole lawful sovereign.

The spectacle of a married man treating his

wife's pantries and storerooms as if they were a grocery concern of which he was the proprietor, and she a clerk on wages; and sifting her stock and accounts to assure himself that no peculation was in progress, and that the cash was all right, may be a sight for the gods, but it is not one for the painter of domestic bliss or the dignity of the " dominant " sex.

And however difficult the domestic servant problem may already be, it is pretty sure to be badly complicated by this type of husband, for I know of more than one instance where excellent and satisfactory servants, who had been hard to find, and were cherished by the housewife as jewels of great price, could not be induced to remain because of the " head of the house " being one of those unsexed men who imagine it to be a part of their duty as husbands to investigate in person every detail of the kitchen economy.

What man would stand tamely by and permit incursions of his wife into his place of business, to overhaul and audit his stock-in-trade, his books, and criticise his commercial or professional methods? How would he feel before his subordinates, who saw his wife doing this? Yet, whenever he stoops to an invasion of her kitchen or storerooms, he puts her in just a similar position before the eyes of her servant

or servants. And even if it should be a case where she acts as her own servant, think of the humiliation, purely personal to herself, to which he subjects her!

The average wife believes in her husband, and is capable of sacrifices for his sake. Suppose you undertake to abuse him in her presence! She will promptly defend him to the last ditch. His faults may be virtues in her eyes—as you will soon learn—but then they must be faults peculiarly appertaining to manhood.

It is quite another matter if his failings be a super-sensitiveness to the deficiencies of his wife's methods as regards the storing of household supplies, the government of the kitchen, the replenishment of the larder, the hanging of pictures, or the grouping of furniture in rooms. The instant he displays a desire to intrude his views in any of these directions, her wifely solicitude and sympathy are forthwith alienated.

The servants, their duties and their sphere of work, are matters for her alone. Though, after all, she will spontaneously confide her woes in connection with these same matters to him if occasion arise. He is expected to condole with her if the good servant, whom the household could so ill afford to lose, suddenly kicks over the traces and deserts the service. How often do just such trials of his wife's make evening

hideous to the man who has come back to the domestic hearth after a day of business stress and impending professional anxieties? He must not, in short, be a critic of either her or the servants,—unless at the times duly appointed by her. Nor, when he *is* appealed to for sympathy in the case of a servant's shortcomings, dare he attempt to excuse the offender, even though, on some former and different occasion, he was equally prohibited from finding the least fault with the domestic who, at that time, was "just perfect" in his wife's estimation.

Well, this is a world of contradictions and inconsistencies; and all that can be said is, that as husband and wife are infallibly bound to display their individual possession of human failings and weaknesses, on one occasion or another, the best guarantee of a harmonious domestic ménage is for each to do their allotted part with reasonable respect for the official rights and recognized authority of the other over his or her respective sphere of action. For in that way lies peace.

HOME CHAT II

KITCHEN AND LAUNDRY: THE DUTIES OF MISTRESS AND MAID THEREIN; THEIR MUTUAL RELATIONS

As regards laundry and kitchen the housekeeper should treat her servants as she would herself. Give your cook and laundress, both for work and rest, accommodations you would consider good enough for yourself. Allow for air, light, sanitation, and reasonable comfort, such as you would expect were you in their place.

Experience has shown that kitchen floors can have no covering so desirable as simple linoleum of plain pattern, not dark in hue. Don't have painted floors; also avoid polished hardwood: paint doesn't last; hardwood is troublesome to care for; the cook will not take the necessary trouble. You will find it pays to buy a first-class linoleum only. Let the design be uniform on the floor of kitchen, laundry, and passages. If the wear in one place is heavier than in another, you can transpose the pieces of linoleum, just as you would in the case of a carpet;

and linoleum of the " inlaid " kind has infinite endurance for wear.

Along in front of the range, as well as around the tables, use stout rugs for comfort, as linoleum is chilly when you sit with your feet on it for any length of time.

It has been positively proved that the most convenient, cleanly, and serviceable kitchen table covering is a layer of zinc. Fold and fasten it securely underneath the table edges and corners, so that it cannot catch in anything, or scratch the fingers. You will find that this zinc table-top will remain always free from stains, grease will not sink into it, and to cleanse it is the easiest thing possible. It is far more durable than any wood surface.

The alcove in which the range stands should have, fitted to the top, a hood and a curtain of asbestos. From this sheet-iron hood the curtain runs up and down by pulleys, without the least trouble. Pull it up, and the whole range is free to work at; pull it down, and it closes everything in. In the middle of the curtain are slides, so that at any moment you may inspect all vessels on the range, and keep tab of your cooking operations. When the curtain is down and its slides are shut, the kitchen soon becomes vastly cooler. A hood and curtain of this sort can be had for about $20.

For kitchen pots and such other vessels, have agate ware. You can get it anywhere, and it surpasses in comfort and usefulness ordinary tin or any kind of metal; there is no rust, its weight is less, and it washes just like chinaware. Covers are advisable for all vessels—including those used for roasting. Covered roasting pans will reduce the amount of basting greatly, and produce better general results.

Provide your cook with one comfortable chair; she need not be always on her feet. Do the same for each laundress. Unnecessary standing during work should be avoided; don't do it yourself when you are engaged at any kitchen operations. Get a seat of suitable height to the table where you work.

All chinaware, and the general kitchen vessels, can just as easily be kept in their proper places, and as neatly as the ornaments in the drawing-room. Have a place for pots and kettles; have another for the plates and dishes; insist that the servants lay away each class of articles where they properly belong.

Then come the servants' rooms. Provide iron beds; let the mattresses be excellent, the bedclothes plentiful, and always cleanly. White quilts are not costly and are readily laundered. No need for fancy fittings of any sort in sleeping-rooms. You provide what is

comfortable and easily kept in order; your servants, if they are tasteful, will do the rest. They will put in their own little adornments. Whenever they do, appreciate it, as evidence that they are interested in their rooms. For a song, little curtains and attractive covers for dressing-tables may be had. Give her such, and she will probably value the attention. Do not stint towels.

Many are the anecdotes current about the good effect of a little fellow-feeling between mistress and servant. Good feeling, and as a rule, better service, are the natural result of some thoughtfulness on the mistress' part in these small matters.

The "impossibility" of inducing a servant to remain with you, and the still greater grievance that "Jane always leaves just at the time when she is beginning to suit me, and to fall into the ways of the house"—these are the common, constant complaints of mistresses, everywhere. And why? The real reason—in more than half such instances—is simple enough to find, so simple that few mistresses ever do discover it. Half the time they are wondering why servants don't stay, and ascribing the existence of this state of things to every cause but the right one. It is not solely and exclusively (as most housewives seem to think) sufficient

to pay well, to board well, and to lodge servants well; these are most essential, but there is something more. That something is, to maintain as far as you can a friendly manner towards the servants, to look pleasant, and occasionally to give them a friendly word. With any employé who is of ordinarily good disposition herself such little attentions go a long way, and tend to attach her to her mistress and to her place. Make the experiment (if you have not already done so and seen how efficaciously it works). In that case, I need not address myself to you particularly, but to your numerous sisters, who are less wise. Another thing is, to never lay more work upon a servant than your own sense of what is reasonable assures you she is able to perform. Overloading servants is a very prevalent error with mistresses. Think it out before you apportion the labor, and your own good sense should guide you as to the amount.

If you intelligently plan your week's work, having a day and an hour for the performance of each household duty, you will avoid the loss of a peaceful mind. The housekeeper's bane is needless worry, and that is usually the result of lack of system in arranging the household work of the week. Think, plan, be sure you understand your own plan, and then carry it out.

There is time enough for all you have to do or to arrange for others to do for you; each day is long enough. Set these tasks out in regular order of special hours, and special days of the week, and you will discover that your washing, baking, and every distinct household duty, can be taken up and performed without friction, without interference one with the other; while the despatch and promptness which a simple system strictly followed always ensures, will be your rich reward. You will have more leisure time, your hours of occupation will run smoother, and with one-half the fatigue. Prove this in practice, and you will own how true it is that "order is Heaven's first law."

Never attempt too much at one time. And do not keep vainly thinking that you can. Drill your mind, and your mind will drill your actions, and your actions will dispose of your tasks, until you will realize you have no difficulty at all in "running" your household, for under a simple and regular system the household work will run itself, so to speak.

Much more is accomplished when one does not worry and does not rush. It is those two things which mostly cause loss of time. And they are so easily prevented by making your own little system—a time for this and a time for that—a system any one can devise and live

up to, day by day. Just map out each day's duties and travel according to that map. Then you will avoid all the rough places. And there will be no occasion for worry, since your mind is at ease, knowing everything to be in shape.

It is usually the endeavor to do too much, to " save time " by piling into one hour the work which belongs to, and requires, separate hours for its satisfactory performance, that finally causes confusion and stalls the household train. System ensures a " clear track "; and when each day " ringeth to evensong " you are serene and happy-minded; " each thing accomplished, each thing done," in its own time and place, has " earned," not only a " night's repose," but the additional advantage of an evening of leisure or recreation.

And, likewise, every day is sufficient unto itself; so by keeping each day's work confined to that day, and never permitting one to overlap the other, you have no fear for the morrow. To-day's work is done, and done well; to-morrow it will be the same satisfactory story, because, by adherence to your simple and practical system of division and arrangement of duties, every separate day takes care of itself.

It does not matter to you how other housewives do things. Each one best knows what suits her particular case. The simple fact that

you have gotten your work down to the fine point of practical organization—a thing any sane woman of the most average capacity can do for herself—guarantees you the happiness that comes from a well-arranged system of doing everyday housework, from the kitchen to the laundry, from the drawing-room to the scullery, from the bedrooms to the dining-room, from the top of the house to the bottom. On every side there is order; nowhere is there anything left undone; in your heart there is ease.

Never yield to discouragement; you have no more—perhaps less—to contend with than falls to the lot of a nation-full of other women. They are going through all this every day, everywhere; they are fighting the good fight and winning it. You can, and will, do the same.

In all things, practise reasonable economy. That is the first and last lesson.

HOME CHAT III

THE SIMPLE HOME-LIVING AND THE GERM OF CULTURE

It is not in the Fifth Avenue palace, any more than in its antithesis in that nether world known vaguely as the slums, that we find the simple and elegant methods of living which people of limited means cultivate as a solace for what are generally believed to be the higher amenities.

If one only knew how often opportunities are missed by those whose means, though insufficient for luxury, are ample for that simple elegance which consists rather in form than in display, we should have a revolution of the system of living in many of our middle-class homes.

Primarily human beings ate in caves, tearing the flesh, which was consumed raw, in pieces with their fingers. At the Feast of the Loaves and Fishes there is nothing to suggest that table napkins or finger basins played a part in the arrangements, and we know that even our Anglo-Saxon ancestors were in the times of Hereward the Wake, and other gentlemen of his ilk,

prone to the use of the time-honored apothegm "fingers before forks."

Whenever or wherever that first germ of culture came among us is a difficult matter to empiricise upon, but its birth might be looked for among those select Roman villas with which Great Britain was at one time dotted, and whither patrician taste had probably brought from Rome (whence it had spread from Athens and Pompeii) the subtle accompaniment to gastronomical development known as table etiquette.

It is not precisely table etiquette that is the keynote of dignified home-living, but rather an ensemble of which a delicate and always correct taste is the inevitable keynote, and which rules in the home made beautiful by the observance of those unwritten laws of taste translatable only by and to those capable of enjoying them.

The class of persons who have Sunday clothes, Sunday manners, and who use their best rooms, silverware, and china on Sundays or other specific occasions, scarcely ever reach the habit of every-day elegance of living. The paraphernalia which they preserve so sedulously from vulgar, every-day use is often the "outward and visible sign of this inward and spiritual grace," and when for it are substi-

tuted the every-day cup and saucer, the pewter spoons, the dowdy table cover, and the tawdry etceteras, " a different effect seems to come over the spirit of the dream."

One will easily recall families which they have visited where such rules prevailed. The best rooms were curtained up, only to be opened on rare occasions, and the best of everything was reserved for those occasions upon which social rivalry made it imperative for appearances to be made. In this establishment the meals were served with less decorousness, the courses were rushed through as if the eating of the meal was a business to be gotten through with with the same amount of celerity one would dispose of a task of any other kind. The conversation, if any was indulged in, was of a snappy, disconnected character, and only blurted out between the swallowing of huge mouthfuls of food. The actions of the servants were on a par with those of the persons seated at the table. Dishes were rushed on in a noisy manner, and collected as soon as emptied, to be carried away after the fashion that waiters pursue in very cheap restaurants. To many persons this mode of eating is preferable. They live in a rush, passing from one thing to another in a jerky, disconnected way, which nevertheless they prefer to the older-fashioned methods of living. Wives,

daughters, sons, and servants unconsciously catch this feverish spirit, and everything moves according to the whirlwind schedule.

Such persons lose half the joy of living. In other households, where no more plentiful means exist for providing the table with a luxurious feast, each meal is so arranged and partaken of that one feels like rising from a properly arranged service when it is over. In addition to a feeling that one has dined like the gods there is also a knowledge that hygienic laws have not been violated by the hurried and barbarous habit of bolting enormous quantities of food, according to a given schedule for getting down the largest amount of material in the smallest space of time.

Here I cannot but recall the delight with which I used to receive invitations to dine with two Southern ladies, whose fortunes (destroyed by the war) compelled them to utilize their pens to improvise an income in New York sufficient to support a small ménage.

Although, at best, the income from their work must have been small, and part of it was devoted religiously to matters connected with the old homestead in Kentucky, yet the elegance which radiated from the fourth-story flat occupied by those two descendants of the old Kentucky régime was something never to be forgot-

ten. To begin with, the table was always arranged with a rarely exquisite taste, and this was so, whether or not a guest was expected, for many a time have I, compelled to call in the vicinity of the dinner hour, been compelled to " make myself one of the family " and remain to the meal. Whenever possible, there were both flowers and fruit on the table, and the pleasant colors contrasted charmingly with the snowy cloth, the delicate china, the glittering cut-glass, and the polished silverware.

By whose hand the daintiest of dishes ever enjoyed were concocted was a secret which I never ventured to solve, but I have often thought that, as well as handling their pens skilfully, these two gentlewomen also knew much of the mysteries which are supposed to be the sole prerogative of the high-grade chef.

It is possible that they were the product of the industry of the one domestic whom they managed to retain upon breaking up their Southern home—an old woman who was called " Nursie " by every one, and who had in bygone years acted in the capacity of nursery-maid to the daughter. It was to " Nursie's " careful service at the table that the delightful smoothness of everything was attributable. Her trained eye missed nothing and left few opportunities for the hostesses to supply for their

well-watched guest. But dainty as were service and viands, the charm of the dinner was the conversation, touching all points of social life, and whatever was of interest at the moment. Through the different courses this conversation was strained like so much additional sweetness. There were quips and jests, satirical touches, and comedy points to excite the risibles and aid digestion, and it was with a rare reluctance that one finally, after dallying some two hours over that hospitable board, left it for the drawing-room beyond.

The instances quoted are simply given to illustrate the difference between "eating to live, and living to eat," or upon a broader plane, living life in a civilized way, or living it in the fashion of the under-world, hardly and unsociably; taking out of it none of the sweetness which belongs to it when the higher instincts of the being are considered and cultivated, and the touch which brightens, uplifts, galvanizes into the spiritual from the sensual is given.

It is a mistake to imagine that wealth is the *sine qua non* of culture, for the reverse is often the case. A vulgar display of what money can buy has no effect in conveying the distinguishing mark of good breeding. One often observes in the street a man or a woman clad in the shabbiest clothes, yet so immaculately neat that

there is the hall-mark of gentility upon them beyond the peradventure of a doubt.

Unfortunately the tendency of this age is not for these things. Delicacy of manners is forgotten in the rush and hurry of what passes for living. Vulgar ostentation suffices for innate good breeding, overburdened tables take the place of that assiduous personal courtesy which costs so much more effort. Hotel, restaurant, and apartment life, and various travelling and outing engagements, which interfere so materially with the unity of the home circle, are responsible for the decay of culture in the American home.

A certain roughness of manners has become common, even with well-bred women. This brusqueness imperceptibly eliminates the more delicate manners distinctively feminine, and is far more destructive of the graces than would suggest itself at the outset. Much of this roughness, although emanating from the smart set and carrying the approval of a certain class of people who move in the best society, is sheer vulgarity, and if indulged in by persons of the middle class, would be frowned upon immediately. Unfortunately there are so many women who copy bonnets, hats, and everything, to a twist of the hair, that is copyable from Mayfair that this style spreads imperceptibly,

and in coarser soil degenerates into downright vulgarity. By the time this slang and indifference to form of Mayfair and Park Lane have filtered through Tottenham Court Road, or the Hotel Cecil, to the United States it has assumed a distinctly Brummagen brand, as repulsive as could be expected.

It is the mistress of the household, the young matron particularly, who holds in her hand the power to preserve the old and best order of things, the politeness, the *gentilhommerie,* the chivalry which are the spice of existence and which, once lost, cannot be compensated for by any modern substitutes. It is the cultivation of these homely but delightful ideals which will serve to fill up the vacant spaces in time, which seem to hang so heavily on the hands of the modern society woman. The lessons cannot be learned in any school but that in which one spends all one's days, but there they are, always awaiting the attention and emulation of those who really comprehend and pursue the selection of the fittest.

HOME CHAT IV

SOME WAYSIDE HINTS FOR THE CONSIDERATION OF THE MAID

Consider the importance of mistress and servant being on good terms with one another. It has more to do with the comfort and convenience of both than, unfortunately, either is always ready to admit.

The foundation of a smooth-running household machine very largely rests on mutual confidence, good will, and consideration being maintained between mistress and servant.

We have it on Biblical authority that a house divided against itself cannot stand. And when two people are supposed to be working together, hand in hand, but in reality are working one against the other, what sort of result can be expected? Things are pretty sure to go wrong. It is genuine, friendly union that produces satisfaction, not alone in regard to the work that is being done, but in the hearts of those who are doing it.

I write in equal friendliness to both mistress and servant, with the same recognition of the

rights of both, with the same desire to see both make the best of life.

It is a mistake—I am now trying to talk from the servant's point of view particularly—to enter a new house with your mind made up beforehand that you are going into a campaign, that your mistress and you are commencing a warfare, and her interests and yours are opposed. Rather begin by believing that she may prove a friend. The fact that you are engaged for the place is in itself a proof of her belief that you are the right person for it. Whether your work is to be the tending of costly furniture, expensive ornaments, or valuable crockery, or to prepare the food for the table, her selecting you for the task is evidence of her respect for your capacity. Should it be the children you have charge of, that is a still stronger testimony to her faith in you. This, therefore, is flattering to your own sense of self-respect. In turn, you ought to begin your relations with her by giving her credit for good intentions, for that is only her due. Do your best to believe in her from the start; it will be time enough to change your opinion whenever you are given cause to do so.

They say that half the secret of getting satisfied with new surroundings is to come resolved to like them. Don't begin by saying, each time

you find yourself alone, " This place won't suit me." It is pretty sure not to suit you if you take that sort of view even before you have given it a fair trial. Being sure you " won't be suited " creates a feeling of antagonism in your mistress' mind against you, and in your mind against her. Naturally it does—naturally it must. Many mistresses have not a very happy manner, don't know the way to give directions, and so forth; but back of all this is not necessarily either pride or want of care or thought, but often merely lack of experience; or, in other cases, may be due to the fact of your being strangers, and her constitutional shyness before strangers. Many women—even women of the world—are like that. Give your mistress a chance. When you are longer acquainted, ten to one it will be quite different. And, for none of us can tell, it is possible that there " were others " in your place before, who were not as good as you are, and created an unfavorable impression on the mistress. Such a thing happens not uncommonly, for there are all sorts of people in every line of business, and if your mistress had legitimate cause, in the case of others, to be on her guard, she can't very well be blamed for at first displaying towards a newcomer some of the suspicion she has learned to harbor in the past. Time is needed on both

sides, to consummate proper acquaintance. The best of mistresses sometimes fail to receive the appreciation they deserve from their servants. And this occurs, too, in instances where the employers not alone treat their employés well, but think so much of them that they are even fond of sounding their praises in conversation with other mistresses.

Certainly, you will do the right and proper thing by taking the part of your fellow-workers, your own comrades, wherever injustice is done to any one of them, whether it be a case of unfair blame laid on one of yourselves by a mistress, or if it be a case of overwork, poor board, or room accommodations which are dark, confined, or otherwise unhealthy. And you have reason on your side too, if you don't think much of one who is content to keep a situation where such conditions prevail. But beware of the person who, while really well treated in all respects, goes about saying she is a victim of tyranny which doesn't exist; slurs the employer she is still content to live with; and so seeks to injure the reputation of a household which in truth deserves praise instead of condemnation. Just remember this much, that a complainer like that is a free agent, there is no law to compel her to remain in a bad situation; and that if it *is* as bad as she paints it, and she

has any kind of proper regard for herself, she will throw it up quickly.

Think as highly of your situation as you conscientiously can, and endeavor to retain a good opinion of yourself as well, and base that good opinion on your own good work, well done. No pay is so enjoyed as pay well and truly earned. You will find that your occupation as a servant is as honorable as any in the land, provided that you make it so; for the valued servant who stays steadily in the same family is herself an advertisement of her own worth, and an evidence that she is necessary to her employers. Besides, her continued service with them shows that they must be good people to live with. Moving from one situation to another does not pay. Good clothes, the regard of the family you live with, and money saved, are the rewards of her who holds the record for long service in the same situation.

You have as much reason to be proud of your office as any person in the community has of theirs, if you do your work with your might, and are straightforward, reliable, and true. Reflection will convince you that you are far above the average store or warehouse employé in what you possess and do—duties, as a matter of fact, more dignified than theirs are; more free from temptations, infinitely better

housed, better dressed, and, in the long run, with a greater amount of money for yourself.

There is one little thing more to be said: To stand too strictly on the letter of your engagement, insisting that you are asked to do this and that little thing you never hired yourself to do, is a mistake. Wherever you may look, you will find that, in almost every business or occupation, there are many odds and ends in the way of small tasks to be done which are not strictly in the day's work. Whether the employé is very high up socially, or comparatively low down, he and she are frequently and cheerfully performing tasks—greater or lesser ones —without any return in cash.

You will discover it to be a safe principle, depend on it, to do such additional "chores" when they happen along, with a willing spirit. You are much more likely to gain than to lose by it, sooner or later; if not in one way, then in another.

There are a great many don'ts which the maid may profitably practise. Cooking is an art which tries the temper at times, and the sudden appearance of the mistress of the household in the kitchen at a moment when something particular is being done, or something is going wrong, makes the intrusion perhaps seem provocative. But will an outburst of disrespect or

downright temper mend matters? Not in the slightest degree. The intruder should be informed of the exact condition of affairs, and if she has come down with an unreasonable request for an extra dish to be prepared or some change of arrangements which will complicate matters and delay the dinner, the cook should meet her squarely on the issue and tell her plainly what is, and what is not, possible for accomplishment. If reason will not appeal to the mistress, cook should say, in her ordinary tones and without getting excited, "Very well. I will do my best, but can only hope to avoid disappointing you." The mistress will then be responsible for any failure of the dinner, and it is safe to say that if she is sensible, and the cook knows her business, she will soon take her lessons to heart. The trouble with many girls is that they are afraid to speak up, and allow their mistresses to lay out work for them which cannot possibly be done, without protesting at the state of things. Subsequently, when the failure of accomplishment is discovered, the vials of wrath are opened on the unfortunate creature's head. A word of explanation might have saved a wordy war, perhaps ending in a dismissal. Either this happens, or the girl, feeling that an attempt to impose upon her has been made, commences a tirade against her mistress and be-

comes what is known as saucy. This is something a servant can never guard against too particularly. Her position in the house gives her no prerogative to berate her mistress, however foolishly the mistress may act. There is always the alternative of leaving, which, if she be at all useful, will prove more of a punishment to the mistress than the receipt of a lot of rhodomontade about right and wrong.

The obliging nature is often intruded and imposed upon by the mean, contemptible, and ignorant, but even such a fact should not dissuade the maid from being as obliging as possible on all occasions. When repeated efforts are made, either by the mistress or fellow-servants, to get the best of every transaction, it will be time for the object of their selfishness to protect herself by ways which, while not too conspicuous, will let others know that, if good-natured, she is not inclined to be every designing person's fool.

HOME CHAT V

NEVER TOO LATE TO LEARN

Whilst a young nation yet, we are already teaching the older nations some stirring object-lessons. The American is cast in no archaic mould, and nowhere does his progressive nature demonstrate this more forcibly than in domestic affairs. Our up-to-date flats are enthusiastically copied in London, Paris, and Vienna, and our domestic utensils, fully three-fourths of which were the outcome of Yankee ingenuity (and laziness), are bought wherever under the sun there is intelligence enough to appreciate them.

Although there is a continually menacing attempt on the part of "soulless" corporations to make old persons "back numbers," the up-to-date old man to-day is as alert after new ideas as his twenty-year-old son, and possesses, moreover, the judgment by which to assess the value of the latest discovery.

The more civilized mankind becomes, the more will it venerate honorable old age, and the

more will it gain by its treatment of the stem which sheltered it when only a branch.

Every one knows that in spite of our go-aheadiveness there are quite a few who allow themselves to fall behind in the race and who are forever complaining at being outstripped by others more vigilant than themselves.

The kitchen has its example of these dead-at-the-root specimens as certainly as have the drawing-room, the exchange, and the political camp.

The old cook who made things by a certain schedule "befoh the wah," and who insists upon maintaining that schedule to-day in spite of the occurrence of the Filippinis, the Marion Harlands, and the Mrs. Rorers, is an antique whose place is in the family museum, unless some way can be found to inspire this once excellent servant with a desire to "catch on" to the new way of doing things. The mistress of a household who is handicapped with a case of this kind, must, if she cannot nerve herself to the point of getting rid of the faithful old veteran of a score or two years' service, suffer a serious disadvantage unless she carves out for herself a line of conduct in which tact and firmness are to play a dual part.

The tyranny of the kitchen has been the terror of many a tender-hearted housewife's ex-

istence, and the unnecessary martyrdom has even proved the entering wedge for serious family upheavals and divisions. The mistress who can overcome this hide-bound tendency on the part of her delegate in the sublunary regions will find that no thirst cultivated increases at a larger ratio than does the thirst for knowledge, and that once having kindled this thirst by means of clever diplomacy, and having fed it by leaving around some favorite recipes, she will be in no danger either of starving or of having to oust an old and faithful family retainer. In cases where this course is not pursued the results are apt to be tragic. The younger members of the family, neither filled with the respect for the autocrat of the commissariat nor content to subsist on viands of which they read in the early novels of Mrs. Mary J. Holmes or other writers of her period, protest until the complaining becomes a farce, and then, in sheer desperation, find excuses for starting an establishment of their own and commence the breaking up of the family circle.

Our newer citizens from Latin countries have introduced a thousand and one innovations in the way of cooking, which, upon trial, we often find most acceptable and which serve to increase the variety of our dishes, often without any perceptible addition in the way of ex-

pense. Among these is the putting of oil in the salad dressing, an improvement both from the hygienic and epicurean points of view. Yet I have heard of cooks who would not tolerate such "new-fangled notions."

In the way of sauces there are so many new combinations, which both our Oriental and Latin friends have brought us, that the " old fogy " who will not take them up is a lamentable case of self-elimination and innocuous devolution.

That nothing keeps the individual young so much as activity of the mind has been shown in the cases of our greatest thinkers, men like Gladstone, who, until almost within the shadow of the great change, kept themselves in touch with the latest scientific and political developments of their age.

The housewife or servant who gives way to the paralysis of reactionary impulses should awaken in time to the need of a Brown-Séquard treatment, or a course of the rejuvenating sour or butter milk, now said to be the grand recuperator of the moribund cellular tissue, and the true antidote for the serum of the great mortality microbe.

The woman whose principal solicitude is the spotless array of her pots and pans can scarcely be expected to possess the soul capable of con-

cocting a new sauce, or discovering a new dessert or entremet capable of annihilating the digestive system, but the wise prompting of her mistress will soon purple-line her sordid visions of grease and soot with visions of gastronomical victories calculated to make the lives of her dining-room dependents a dream of culinary surprises and successes contributive to the joy of living. Nor will the effect need to be an extraordinary one, with the resources now at the command of the average cook.

A true woman's kingdom is her home, and her attention does not belong to the kitchen. Although the stomach is the main route by which the males of the family must be kept in good humor, the good housewife is considerably more than a good cook.

Who does not remember some matronly head of one of these same household kingdoms who was a marvel of resource in any and every emergency—an encyclopædia of information, sought for for advice by every one in the vicinity, and even relied upon by the doctor to help him out of a ticklish predicament owing to her ready wit and apparently inexhaustible store of small but intensely useful information?

These are the ideal lines upon which a young mother will endeavor to shape her career. Nothing which may be of future use will be al-

lowed to escape her attention. It will be living to learn, day by day, and thereby accumulating from practical experience a fund of information which no course of lectures or reading can provide.

Such a woman will prove a veritable angel in a panic. When Mrs. Nodsome's little boy, next door, has, sweet little idiot, distinguished himself by swallowing a cent, and every one is prophesying appendicitis for him, the ready housewife will quietly send for a dose of castor oil, to which a few drops of opium have been added, and will see that the young hopeful, too frightened to resist, swallows it; thus probably warding off all the possible ill consequences of his careless action.

Perhaps Mrs. Nodsome, by a fatal error, will have swallowed some bug-poison, iodine, or other household specific for outside application. The ready housewife will not await the arrival of the doctor. She knows that the first thing he will do upon arrival will be to apply the stomach pump. She will anticipate the arrival of this apparatus by making the victim swallow hot soap suds, hot water, or hot mustard and water, sweet oil, whites of eggs, or any other thing having for its object the compulsory ejection by the stomach of its undesirable contents. Very often the ready housewife may

save a life by her little knowledge added to her prompt action. That will be a diploma worth membership in a hundred alumni associations.

A woman of this kind, whom I am almost making a pen portrait of in my lecture, called upon a friend lately and found her in great distress. The clumsy parlor maid had just spilled a bottle of ink in the centre of a magnificent thousand-dollar Persian rug, only recently laid down in her drawing-room. "Bring me all the salt that you have in the house, immediately," said her caller.

"Salt!" The victim of the maid's madness laughed derisively, but obeyed mechanically, and the ugly blot was soon covered with the snowy substance a couple of inches deep.

"In the morning you will find, upon removing the salt, that your ink-stains have disappeared," said the ready housewife as she made her adieu to her still sceptical hostess. But the morning proved the truth of the salt cure; for the carpet had been saved by the timely use of the salt, which had eaten up the stains of the ink and left the carpet unstained.

There is so much handy information of this character constantly transpiring that one who "runs may read," and by a little effort in the direction of memorizing may accumulate an amount of practical knowledge which will, in

course of time, assume really prodigious proportions. The dispensing of this information among one's servants becomes at once an interesting and practical means of utilizing it. The imparting of information is seldom a one-sided proposition, as Dr. Johnson, the greatest distributor of information, profitably discovered, and in revealing her discoveries to those in her domestic circle, the mistress will frequently, in turn, acquire many items of an equally noteworthy character.

Servants' waste is a proverbial expression, and something more than a proverbial annoyance. Economy in the kitchen should be sedulously studied, not with a view alone to saving expense, but with a desire to achieve the best results for the smallest expenditure of labor or money—in fact, to realize the scientific ideal of the minimum cost of production. When the matter is placed in this light before the domestics it is apt to be received more agreeably than when economy is simply put into operation without a logical reason, other than parsimony, being presented to " the help."

Economical methods can be acquired only by constant study of resources and the curtailment of unnecessary wants, and in " living to learn " the economies of petty housekeeping must be studied at close range, from day to day, by the

ready housewife, whose alert perceptions will enable her to promptly analyze any proposition with a bearing upon the possibilities of her larder, her fuel bill, her wage list, or any of the hundred and one mickles which go to make up a muckle, and which eventually render the budget conformable to the resources of the exchequer.

A good plan for a young housekeeper to pursue is to keep a scrap-book, into which can be pasted useful clippings pertaining to the household, culled from the hundreds of publications which aim to present hints of value to the housewife. Many of these are merely worked over "saws," but much new material is constantly cropping up which can be culled by the intelligent and ambitious young householder, and which will sooner or later probably prove invaluable to her, and also to those shiftless persons who prefer to borrow the fruits of others' industry to investing their own energy and capital in the securities issued by the Bank of Knowledge. Such clippings can be studied at leisure and should be tested wherever some ridiculous point suggests doubt as to the veracity of the item.

Minding the much-quoted assertion that "familiarity breeds contempt," the woman of taste will instinctively maintain precisely that

attitude of command and affability combined which go to the promotion of a feeling of respect and confidence between employé and employer. The ready housewife, understanding the inconvenience attached to a peremptory month's notice, will pause before making hasty remarks to a valuable and efficient cook, of a character likely to affect her good humor. Mistresses do well to remember that their own troubles are not the only clouds which darken the domestic horizon—that satellites as well as suns have their periods of eclipse and their unpropitious moments—that sore hearts and broken chinaware often have a psychological connection possibly inspired by hasty and sometimes unjust strictures, even if the notice to leave is delayed until a more convenient occasion. The clever housewife has a well-trained, indestructible smile, designed entirely for the reception of guests, which she will find it equally politic to don when preparing to visit the kitchen.

This smile is more valuable than pearls or rubies, and with its magic aid the most remarkable tricks of legerdemain may be accomplished. The surly chef who has been awaiting an opportunity to " unbosom " finds herself checked by this engrossing smile as soon as she attempts to utter her carefully prepared anathemas. In

another minute a few well-chosen words have disarmed her completely, and the sky is clear for madame to announce her plans and obtain a willing ear as to her desires for the day's table. There is much to live and learn, as there is much to live and forget, but the housewife can study nothing to greater advantage than the cultivation of the indestructible smile—a fortune in itself, a fairy wand before which household troubles disappear like snowflakes on a sunny morning, and from which all the bright hues of the rainbow can be developed on the dullest days of the year.

HOME CHAT VI

JUST A LITTLE CHEMISTRY FOR THE COOK

Although a cook can hardly be expected to grasp the meaning of proteids, albumens, or phosphates, a little knowledge of which will guide the mistress in her choice of combinations of dishes, there is one branch of chemistry with which all cooks are well acquainted, whether they know science or not.

When milk turns sour, they know that acid is produced, and some are aware that soda is an alkali, while most people have some idea that alkalis and acids are at variance and always counteract each other's effects.

Decomposition always produces acid, whether in milk, beef, or wine. Beefsteaks and chops, just a little "gone," may be revived with soda and water rubbed in; the soda neutralizing the acids formed when beef "turns."

In like manner, a piece of soda thrown into the water in boiling a slightly questionable fowl or piece of meat will remove the suspicion. If the meat is "turned," there will be effer-

vescence, caused by the meeting of acid and alkali, when the meat is put in the water, and when this ceases the meat will be pure again. Butter made badly, because the farmer's hand was too lazy to separate out all the milk which afterwards turned sour in the butter, may be made good enough for cooking, at any rate, by being worked over in water containing soda.

A salted cloth wrapped round this butter with a piece of charcoal in the outer fold will keep the butter sweet.

A burn is treated by laying on dry soda, for, as well as excluding the air, the soda combines with the acid formed when skin and flesh are injured.

Formic acid causes the pain of the wasp or scorpion's sting. Ammonia is the recognized antidote; it is a strong alkali and destroys the irritant formic acid.

Griddle-cake batter turned sour, if taken in time and beaten with a little soda dissolved in boiling water, will lose its pungent odor; and bread dough, slightly sour, if kneaded with the same solution will recover its freshness.

Baking-powder is a mixture of soda and tartaric acid filled in with arrowroot. As soon as it is wet the soda and acid act on each other and form carbonic-acid gas, which lightens the

dough; the same gas is formed when yeast ferments and leavens bread.

This soda, or bicarbonate of soda as it is known in chemistry, is often used alone instead of baking-powder, and would seem to answer the same purpose, but that is not the case.

To get proper results there must be an acid of some kind to work with the soda, and great care must be taken not to be too generous with the soda, or yellow streaks will appear in the biscuits or cake. An even teaspoonful of soda is sufficient for the acid in 2 cupfuls of butter milk or clabber, liberating enough gas to lighten the dough without leaving any unwholesome excess of soda, or 2 heaped teaspoonfuls of cream of tartar will supply the proper acidity. Soda should never be used alone.

Charcoal is a great thing for removing odors and keeping things sweet,—the charcoal filter is a daily example. A bag of powdered charcoal sunk with a weight in the pork barrel will keep the brine pure and sweet without blackening the contents.

Water which is turbid can be cleansed by stirring alum into it, 1 tablespoonful to four gallons; a precipitate will be formed which is allowed to settle, and the clear water above can be drawn off and used even for drinking, as the

alum is all combined with the impurities which caused turbidity.

Tough meat may be made tender by acid. Cover a beefsteak for some hours with vinegar or lemon or olive-oil; the fibres will be softened by the acid and further made supple by the oil; a little vinegar added to the water in which fowl or mutton is boiled will do the same. Vinegar, just a dash, added while fish is boiling, will remove the strong oily taste.

Ammonia is a useful kitchen chemical. It cuts grease by acting on it chemically, and also gives lustre to silver, but should be used very sparingly for the latter purpose.

When making a salad dressing do not throw the oil, vinegar, salt, pepper, and mustard together, but spend a little time in stirring and rubbing the ingredients; the chemical emulsion thus made will be a far smoother and more agreeable condiment.

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